

2.2 DEVELOPMENT PLAN

2.2.1 Front End Engineering Design Plan

Front End Engineering Design Plan

ORGANIZATION CHART FOR FEED DUTIES AND TASKS

*LSCC = 1 Sinopec = 2 U.S. Design Firms = 3

*Design Firms

Overall Engineering Design Manager

LSCC/Sinopec

A. Pipeline and Compressor Stations	1, 2
Corridor Survey	3
Geotechnical Engineering	3
Civil Engineering	1, 2, 3
Mechanical Engineering	1, 2, 3
Electrical Engineering	1, 2, 3
Petroleum Engineering	1, 2, 3
Structural Engineering	1, 2, 3
B. Gas Treatment Plant (GTP) by North Slope Shipper	
Site Survey	3
Geotechnical Engineering	3
Plant Design	3
Petroleum Engineering	3
C. Natural Gas Liquids Plant (NGL)	
Site Survey	3
Geotechnical Engineering	3
Plant Design	1, 2
Petroleum Engineering	1, 2, 3
D. Liquefied Natural Gas (LNG) Plant	
Site Survey	3
Geotechnical Engineering	3
Plant Design	1, 2
Petroleum Engineering	1, 2, 3
E. Marine Terminal and Storage	
Site Survey	3
Geotechnical Engineering	3
Dock and Terminal Design	1, 2, 3

Petroleum Engineering	1, 2, 3
F. LNG Ships	
Ship Builders from the U.S., China, Japan, Korea & Poland	1
G. Receiving station for LNG and Degasification Plants	
Site Survey	3
Geotechnical Engineering	3
Receiving Station for LNG	1, 2, 3
LNG Degasification Plant	1, 2, 3
H. Construction Cost Estimate	1, 2, 3
I. Field work, legal ownership investigation, environmental studies archeological surveys right-of-way inquiries, and other activities in support of all regulatory application requirements.	1, 2, 3

Management of this entire project will be the responsibility of the General Engineering Design Manager. Management of each item of engineering will have a Division General Manager, and under him will be Engineering Managers, Engineers, Designers, and Technicians. The Division General Manager will be responsible for the task items listed, and he, in turn, reports to the overall General Engineering Design Manager for his day-to-day tasks, progress, and schedules.

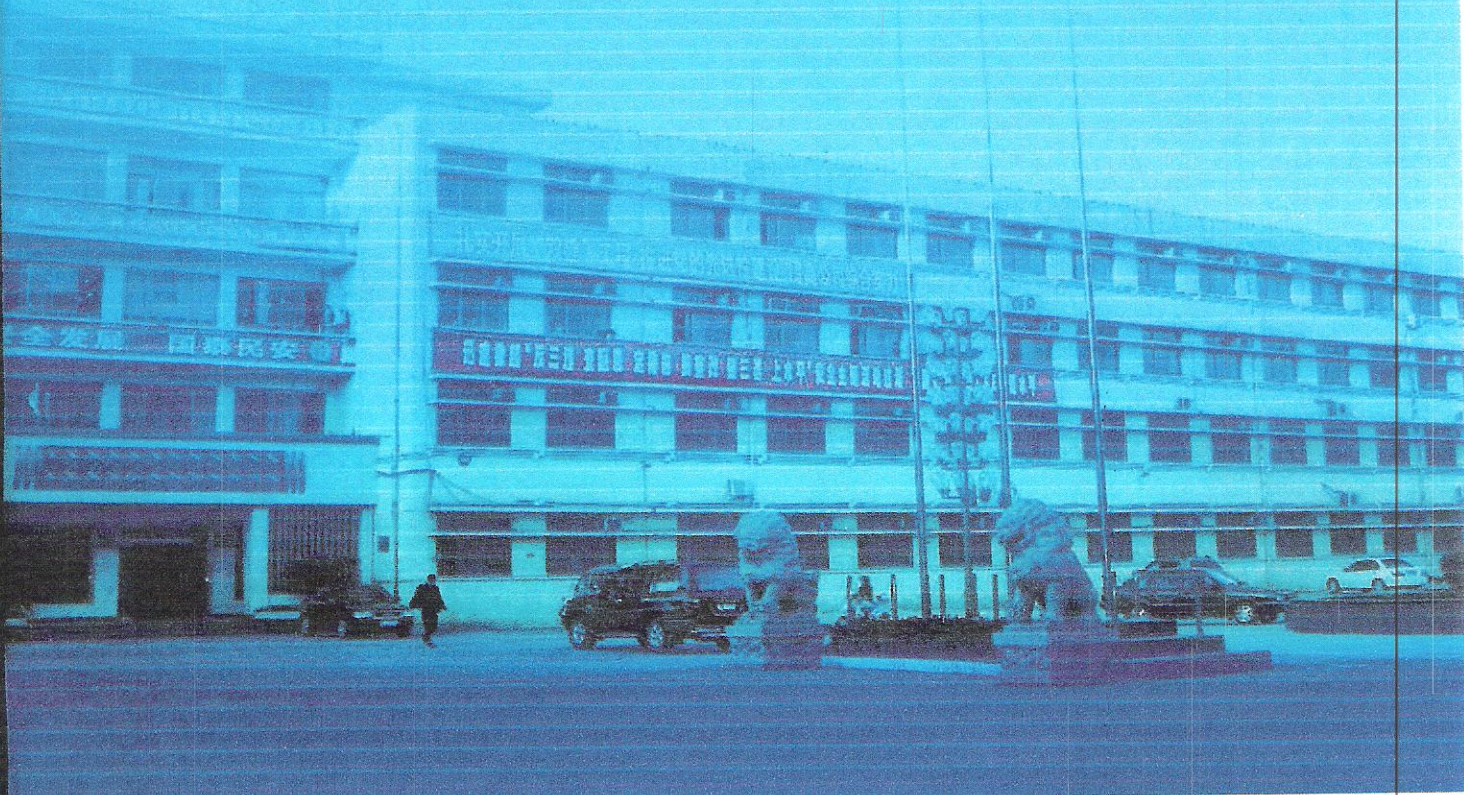
The resources of FEED will come from Sinopec General Engineering and Construction Divisions, and will be partially reimbursed by the State of Alaska AGIA Inducement funds. The total FEED and permit application, land leases, and land acquisition is estimated in sections 2.5.1. and 2.5.2.

The governing model is a straight pyramid, top down organization chart. Every engineer and technician will report to the division supervisor and they, in turn, report to the item general engineering manager. The items such as "Pipeline", "LNG," "NGL Plant", "Marine Terminal",

EXHIBIT No. 2 3 pages



Engineering Construction General Company



TEAMING AGREEMENT


The ZPEB International and the Little Susitna Construction Company of Alaska hereby form a teaming agreement to produce an application for a license to build a gas pipeline under the Alaska Gas line Inducement Act. The ZPEB International agrees to act as a sub-consultant of the Little Susitna Construction Company to provide information and support for the application process, and the Little Susitna Construction Company agrees to produce an appropriate application for the license to build the AGIA pipeline.

This Agreement is valid for 2 years from the date of undersigning.

After getting the license, ZPEB International and Little Susitna Construction Company of Alaska will sign a new agreement to perform the project.



Title: Acting General Manager of
ZPEB International



Title: President of Little Susitna
Construction Co.

Date: 2007-10-24

Date: Oct 24, 2007



中原石油勘探局工程建设总公司

Engineering Construction General Company of ZPEB

地址：河南省濮阳市大庆路 122 号

Add: No.122 Daqing Road Puyang City Henan Province China

Fax No: 0393-4492718

Tel. No: 0393-4826413

LEETER

发往： To：	Little Susitna Construction Company	编号： Ref.No：	ZECGC/L/2007/116		
收件人： Attn：	Dominic Lee P.E.	发自： From：	ZECGC		
抄送： Cc：		日期： Date：	2007.11.13	页数： Page No：	1

Subject : LETTER OF INTENT

Dear Sir(s),

Thank you for your letter dated Nov 8,2007.

We are hereby confirmed that we are intended to procure an estimated 4BCF/D natural gas from the pipeline project of Alaska state after it is converted to liquid natural gas if the price can be worked out satisfactorily,

Sincerely yours

Hu PeiHai

Vice General Manager

EXHIBIT 3

(13 Pages)

ACCIDENT PREVENTION PLAN

BACKGROUND INFORMATION

General Contractor: Little Susitna Construction Company, Inc. (LSCC)
Project name: Phase II Remedial Design for Boiler Room PCB/Lead Paint Mitigation Federal Building, Juneau, Alaska

PROJECT DESCRIPTION, DESCRIPTION OF WORK TO BE PERFORMED, AND LOCATION

Provide PCB Remediation and related Construction Services for the Juneau Federal Building Boiler room which has approximately 4,000 square feet. The primary objective of this project is to prevent human exposure to PCB contamination. This includes PCB impacted paint material and the potential for residual PCBs to migrate into the boiler room drainage trench/sump system and from there into the environment. In short, the scope of work includes removal of the existing topping slab, epoxy inject all existing cracks on the existing structural slab, install geocomposite drainage layer on the structural slab and install a new 3-inch topping slab. For detail summary of Hazardous Materials Work, refer to Section 01011 - Summary of Hazardous Materials Work of the project specifications. Miscellaneous items attached to walls, floors and loosely sitting on floors will need to be moved to allow for work. The contractor shall also provide a 100 hp 125 psi boiler as a temporary heating source for the building.

RESPONSIBILITY AND LINES OF AUTHORITY

It is the policy of this company to insure that each and every employee is provided with safe working conditions, free from recognized hazards. It is the policy of this company to comply with established provisions of the Occupational Safety and Health Act and any other Federal, State, or Local Safety Codes that may apply.

Responsibility to management and supervision with the necessary service relating to safety activity and the required advice for promotion of any effective Safety Program rests with the President of the Corporation.

Responsibility for implementation of the Safety Program cannot be delegated, but must be accepted and enforced by staff management and line management at field level. The supervisor is the key to effective control of operation because he is usually in the best position to detect and correct violations of the program.

All personnel involved in management are herewith delegated the authority and the responsibility for the implementation and enforcement of the Safety Program, and will be held accountable for their job site safety record.

Further, we want to make clear our position with respect to control of losses resulting from accidents and illnesses occurring in our business. These losses are of considerable concern to us because:

- 1) The primary concern is for the health and safety of our employees. An illness or injury that would cause temporary or permanent disability to any employee must be avoided.
- 2) The substantial indirect costs associated with these losses are all borne by every one.
- 3) The insurance premium costs directly reflect these losses.
- 4) The basic conditions responsible for these losses are also causing, or can cause, other serious losses in our operations. In other words, each of these losses is an indication of something wrong in our organization and its practices.

The purpose of our Safety Program is to prevent accident, injury, and illness by locating and correcting the conditions responsible and, as a result of this, the economic waste that occurs.

All employees, supervisory or otherwise, are herewith directed to do everything reasonable and necessary to conform to this policy.

Safety Responsibilities

Management regards worker safety and health as a fundamental value of the organization and applies its commitment to safety and health with as much vigor as to LSCC's other organization goals. Management will continue to conduct comprehensive worksite surveys for health and safety. LSCC will analyze new facilities, procedures, materials, and equipment and inform employees on the updated material. Supervisors will continue to support the program at a job site level and should be consulted on any policy or procedural question.

Each employee should be the person most concerned with his or her own safety. For this reason, each employee has an important place in the safety program and is expected to cooperate fully in all activities and measure of safety for themselves, fellow, workers, and their employer. Your safety and well being can be accomplished only through your constant, sincere effort. Merely talking about safety will not make safety a fact.

The management of Little Susitna Construction Company, Inc. will fully comply with and carry out safety requirements as prescribed by state, federal, and local laws and regulations. Each employee has this same responsibility.

IT TAKES ACTION !!!

SAFETY -- IS PERFORMING YOUR DAILY TASKS IN THE SAFE MANNER YOU HAVE BEEN SHOWN.

SAFETY -- ON THIS JOB IS REQUIRED! SAFETY RULES MUST BE FOLLOWED!

SUBCONTRACTORS AND SUPPLIERS

Asbestos Removal Specialists of Alaska, Inc. (ARSA) will be a major subcontractor on the site performing PCB and Lead Paint abatement activities. ARSA and their air monitoring firm will be the only know subcontractors or suppliers on the site. All subcontractors and suppliers shall be expected to follow the safety policies of LSCC. Due to the integrated nature of work on this project, LSCC and ARSA have combined their accident/safety plans to meet the specific needs of this project and agree to mutually administer the plan.

TRAINING PROGRAM

All employee s receive safety training during their initial asbestos abatement training. The very nature of asbestos abatement requires the teaching of safety in the work place to prevent the contamination of the worker and public during the abatement process. The entire course is geared to the safe removal of asbestos containing materials.

This safety training during the basic training however, does not train the employee of the specific safety risks during specific abatement processes. These specific areas need to, and must, be addressed before each job begins. In other words each job begins with a safety meeting with the topics discussed to include the risks of the specific job at hand.

In some cases certain chemicals or site-specific hazards will come up which are not covered by the standard safety rules of the LSCC/ARSA program. If and when these specific items come up they will be addressed by outside experts in the fields of concern. These specific items include, but are not limited to, work in petroleum refineries, oil field operations, severe Arctic conditions, and work in and around electrical vaults, refrigeration systems, and other hazardous materials.

Employee training will be conducted in the classroom setting with persons qualified, and approved by the Owners or Contractors, to train in the fields to be addressed. All persons shall receive and carry cards identifying the specific training received.

All employees shall receive annual training in safety and the exposure to the different safety risks. This training shall address the specific issues of the different chemicals present in the work place for all contracts, which LSCC/ARSA has signed. If specific substances are to be present in jobs these shall be addressed at a specific safety meeting for the job and/or training will be given if the employee has not received previous training.

All employees of the asbestos abatement industry have received training of protective equipment and decontamination procedures. All employees are required to wear protective equipment and have proper personal grooming so the protective equipment can function as designed. Specific procedures and equipment will be addressed in training sessions for hazards not covered in the asbestos abatement course.

SAFETY AND HEALTH INSPECTIONS

The on-site superintendent/foreman shall be responsible for all safety and health inspections. Inspections shall be made at the beginning of each shift and continued throughout each day and throughout the project. The inspections shall be recorded in the project daily log. The daily log has a section which includes all phases of work which may be done each day. This list is in the form of a check list with an area for notes on any discrepancies.

SAFETY AND HEALTH EXPECTATIONS AND COMPLIANCE

ACCIDENT PREVENTION AND LOSS CONTROL

Supervisors shall be responsible for all work site inspection and correction of hazardous procedures. The supervisor's responsibilities shall include, but not be limited to:

1. Supervisors shall ensure that all operations, activities and work places under their supervision are in full compliance with the requirements of laws regulating employees' safety and health.

2. Supervisors shall ensure that work places are free from recognized hazards, which are likely to cause death, injury or illness.
3. Supervisors shall ensure that all people on the premises of projects under their supervision observe local safety and health precautions.
4. Supervisors shall expressly design accident and loss prevention into work procedures. Supervisors shall educate and train employees in the use of safe procedures and in the concepts and individual responsibilities for safety and health. Supervisors are to assure the continuous observance of safety precautions.
5. Supervisors shall continually monitor and refine methods for reducing accidents and losses to take into account changes in the work force and the evolution of operations and work place technology.
6. Supervisors shall consider employee compliance with safety procedures, laws and regulations in such deliberations as job performance evaluation, suitability for promotion, and continuance of employment.

It is the goal of LSCC/ARSA to have no loss time or OSHA reportable accidents on any job. LSCC has an excellent record for safety and a history of no loss time accidents within the last 5 years. ARSA has an excellent record for safety and a history of no loss time accidents.

The supervisor shall reprimand any employee who violates the safety policies of the project and LSCC/ARSA. All safety violations shall be recorded in the daily log. In addition any safety violations shall be recorded and a record placed in the employees master employment file. If continued violations occur by the same employee the employee shall be dismissed from the job.

All accidents shall be attended to at once. The safety and health of the employee are the most important aspect of any job. Emergency medical attention shall be rendered on the site by First Aid trained personnel and fully trained professional emergency personnel shall be called for all serious injuries.

All accidents shall be reported to management and the proper accident reports and forms shall be filled out as soon as possible. Management and the safety officer for the company will investigate all accidents. All personnel of the Owner or Contractor shall be notified at the earliest possible time.

ACCIDENT REPORTING

Exposure data: The payroll department shall be responsible for this data.

Accident investigations, reports and logs:

- a. Investigations: All accidents shall be investigated by LSCC/ARSA office management. The President of the company is the designated primary safety officer for the company and shall be in charge of all accident investigations. In his/her absence the Contract Manager shall be the chief investigator.
- b. Reports: The project foreman shall be responsible for field reports of each accident. After field reports are filed the office manager shall be responsible for checking accuracy of the reports, filing needed forms for workman's compensation reports and recording information in the OSHA 200 log.
- c. Immediate notification of major accidents: For all major (medical treatment required and/or loss time) accidents the General Contractor shall be notified. As the ultimate responsible party for the project it shall be the General Contractor's responsibility to notify, as applicable, the Owner, Contracting Officer or Project Manager and, if applicable OSHA, of the accident.

MEDICAL SUPPORT

On-site medical support shall be the Facility Emergency Medical Personal. For injuries requiring further medical treatment the injured person shall be transported to the nearest civilian medical facility. Appropriate transportation to of site medical facilities shall be determined by the first response medical personal.

PROTECTIVE EQUIPMENT

Personal protective equipment provided by LSCC and/or ARSA and to be used as needed includes:

3. Disposable clothing - Shall be worn at all times during asbestos removal operations. This clothing will be different for each type of work performed. Workers shall be instructed as to the type of work and then shall select appropriate clothing for the job.
4. Respirators - Shall be worn in compliance with the established company respirator program.
 - a. Half-face negative pressure
 - b. Full-face Positive Air Purifying Respirators
 - c. Full-face supplied air
 - d. Full-face self-contained breathing apparatus.
5. Hard hats - Shall comply with ANSI Standard No. A89 2 and be worn when an overhead hazard is present and/or when

required by specifications of the contract.

6. Rubber boots - Shall be worn as needed in the abatement area. Boots will not be worn when a worker leaves the containment area and must be decontaminated before removal from the containment area or sealed in plastic bags.
7. Eye protection - Contact lenses may not be worn on the job. This is for any type of work being done. Safety glasses shall be worn at any time there is a chance of debris entering the eyes or when required by the contract specifications.
8. Gloves - Shall be worn as needed during the application of chemical agents.
9. Hearing Protection - Hearing protection shall be worn when the TWA is exceeded or expected to be exceeded.

It is ARSA's policy to provide MSDS fact sheets for each chemical agent brought on the job site. All ARSA employees shall have received training on the hazards of chemical agents on the job site.

PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL (as applicable)

- a. hazard communications program:

General Company Policy

Little Susitna Construction Company, Inc. (LSCC) and Asbestos Removal Specialists of AK, Inc. (ARSA) have developed a Hazard Communication Program to enhance our employees' health and safety. LSCC and ARSA are complying with the OSHA Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200, by providing information about chemical and physical agent hazards, by using MSDS's, by ensuring containers are labeled, and by providing training.

Under our program, our employees are informed of the hazardous properties of the chemicals they work with, safe handling procedures, and the hazards of non-routine tasks. Mr. John Abrams, the Safety and Health Manager for this project, will review and update the program as necessary to provide accurate information. Copies of the Hazardous Communication Program may be obtained from Mr. Abrams at 1189 Van Horn Road Fairbanks, AK 99701 during the working hours of 8:00 a.m. and 5:00 p.m.

List of Hazardous Chemicals and Physical Agents

The Safety and Health Manager will make a list of all hazardous chemicals and related work practices used at the job site and will update the list as necessary. Our list of chemicals identifies all chemicals used in our work areas and the physical agent data sheets that apply to each specific project. A master list of these chemicals and PADS will be maintained and available from Mr. Abrams.

Material Safety Data Sheets

MSDS's provide you with specific information on the chemicals you use. A binder will be maintained in the office with an MSDS on every substance on the hazardous chemical list. MSDS are available to all employees for review during each work shift. A copy also will be on the job site location. If MSDS are not available or new chemicals in use do not have MSDS, please immediately contact the Safety and Health Manager.

Container Labeling

It is the policy of LSCC/ARSA that no container of hazardous chemicals will be released for use unless it has a readable label with the following information:

- Containers are clearly labeled as to the contents
- Appropriate hazard warnings
- The name and address of the manufacturer

Containers that are transported to a job site will be checked by the supervisor to make sure all containers are properly labeled. If chemicals from a labeled container are transferred to a portable container, the secondary container will be labeled. It will be labeled with either an extra copy of the original manufacturer's label or with generic labels which have fill-in blocks for the identity and hazard warning.

Hazardous Non-routine Tasks

On any occasion that employees are required to perform hazardous non-routine tasks, training will be provided. Prior to starting work on such projects, each affected employee will be given information by the supervisor about hazards to which they may be exposed to and the proper precautions to take. This information will include the following:

- Specific chemical hazards
- Protective/safety measures which will be utilized
- LSCC/ARSA's steps to lessen the hazards

Training

At the time of our Asbestos Abatement Certification Course, all individuals are taught about various hazards they may

encounter on the job. Our course is current with the new chemicals introduced to the asbestos abatement field.

It is our policy that all employees are required to receive initial training on the Hazard Communication Standard and the safe use of those hazardous chemicals. It will include the following items:

- An overview of the requirements contained in ARSA's Hazard Communication Standard Review of the chemicals and physical properties of hazardous materials (e.g., flash point, reactivity) and methods that can be used to detect the presence or release of chemicals
- Physical hazards of chemicals (e.g., potential for fire, explosion)
- Health effects of the hazardous chemicals and physical agents, including signs and symptoms of exposure
- Location and availability of our written hazard program; how to read and interpret information on MSDS's and labels.
- Work procedures to lessen or prevent exposure to hazardous chemicals and physical agents through usage of control/work practices (e.g., personal protective equipment required, proper use and maintenance, etc.)
- Emergency procedures to follow if employees are exposed
- Steps LSCC/ARSA has taken to lessen or prevent exposure to chemicals and physical agents

It is our policy that there be regularly held safety meetings on the worksite as the job is on-going. Any new chemical or hazard will be made known. Employees are invited to add input on the training they have received and their suggestions for improving it.

NOTE: IT IS CRITICALLY IMPORTANT THAT ALL LSCC AND ARSA EMPLOYEES UNDERSTAND THE TRAINING. IF ANY OF THEM HAVE ANY ADDITIONAL QUESTIONS, THEY ARE ADVISED TO CONTACT A SUPERVISOR OR SAFETY AND HEALTH MANAGER.

MULTI-EMPLOYER WORKSITES

The Safety and Health Manager will contact any employee(s) of any other employer on the worksite that may be exposed to any chemical hazards in the normal course of their work. Other items that will be supplied to the employer(s) are the following:

- Information on location of MSDS and PADS
- Inform the employer (s) of precautionary measures necessary and emergency procedures
- Inform the employer(s) of the labeling system used

The Safety and Health Manager will obtain MSDS or PADS for any hazardous chemicals or physical agents that other employer (s) may bring onto the site.

Additional Information

All employees and/or their designated representatives, can obtain further information on this written program, the hazard communication standard, applicable MSDS's, PAD's, and chemical information lists at the office located at:

3049 Davis Road
Fairbanks, AK 99709

Confined Space

This plan covers the basic requirements involved in entering areas or spaces. Confined space hazards are of great concern, more so when hazardous materials are involved. The condition of confinement itself may be hazardous, but the potential for disaster is always present when hazardous materials are involved.

Definition

Due to the risk involved in working in confined spaces there are several definitions of a confined space which must be considered. Each of these definitions has been generated by Federal agencies or National Standards Organizations. These definitions must be considered when defining a confined space entry program.

NIOSH defines a confined space as an area which has any one of the following:

- Limited area for entry and exit.
- Unfavorable natural ventilation.
- Is not designed for continuous worker occupancy.

ANSI A117.1-1989 state that confined spaces are enclosed areas that have the following characteristics:

- Its primary function is something other than human occupancy, and

- Has restricted entry and exit, and
- May contain potential or unknown hazards.

OSHA 1910.146 states that permit (confined) spaces means an enclosure/space which:

- Is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit.
- Is not designed for continuous occupancy and:
- Contains or has known potential to contain a hazardous atmosphere, or
- Contains a material with the potential for engulfment of entrant, or
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor sloped downward and tapers to a smaller cross section, or
- Contains any other recognized serious safety or health hazard.

These definitions provide the basis for development of confined spaces entry programs.

Identification of Permit Required Confined Spaces

There are cases in which a space that is clearly confined in nature does NOT meet the definition of confined space identified above. Care must be taken in any confined space however, of critical importance is the proper identification of confined spaces which require permitted entry. LSCC/ARSA management/supervisors are responsible for reading and demonstrating knowledge of the OSHA/NIOSH/ANSI confined space entry identification requirements.

LSCC/ARSA management and/or supervisors shall inspect any space that could be classified as a confined space to determine entry requirements. If LSCC/ARSA on the job site owner/client has identified an area as a confined space LSCC/ARSA management and/or supervisors shall tour the job site and identify any potential confined spaces and validate confined spaces identified consistent with the criteria in the definitions provided in this document.

Typically the following areas or confines should be considered as confined spaces:

- Tanks
- Vessels
- Silos
- Storage bins
- Hoppers
- Vaults
- Pits
- Diked areas

In identifying confined spaces a complete assessment of all spaces confined in nature must be conducted. During this assessment some specific information must be considered. In order to standardize this information a Confined Space Evaluation Form has been developed. This form is intended to provide guidance in the assessment of confined spaces and assist project personnel to determine specific hazards which must be addressed for both permit required and non-permit required confined spaces.

If there is a potentially confined space, the status of which cannot be mutually agreed upon by LSCC/ARSA management and Owner/Client representatives, the area shall be treated as a confined space. In every case of making the determination of classification of a space as a confined space has been made by LSCC/ARSA management and/or supervisors in concurrence with Owner/Client representatives.

General Rules for Confined Space Entry

1. Determine the EXACT number and names of person entering the confined space. This number should be limited to as few as practical due to the inherent danger involved in working in confined spaces.
2. Identify the specific hazards which might be involved. Include the magnitude of the hazards, likelihood of hazards occurrence, consequences of hazard occurrence, potential for changing conditions/activities, strategies for controlling hazards and the impact or need for emergency response.
3. Conduct a thorough briefing on the work to be accomplished and the potential hazards which might be encountered.
4. Conduct atmospheric testing using a qualified technician, unless the confined space is no-permit type and adequately ventilated. Test ventilation system both ON and OFF.
5. Initially test and periodically re-test the atmospheric environment within the confined space. This shall be done with the ventilation system both On and OFF.
6. All moving equipment in the confined space must be locked-out. Ventilation must be either natural or mechanically

provided into the confined space. All hazardous or corrosive substances that contain inert, toxic, flammable or corrosive material must be valved off, blanked, disconnected and separated. Atmospheric tests must be performed on a regular basis in a confined area where entry is required. The area must also be checked for decaying vegetation or animal matter that could produce methane. Adequate lighting must be provided within the space. If the confined area is located below the ground or near where motor vehicles are operating, care must be taken that vehicle exhaust of carbon monoxide does not enter the space.

Permit Required Confined Space Entry General Rules

PERMIT REQUIRED CONFINED SPACE WILL NOT OCCUR ON THIS PROJECT

The confined space entry permit identifies the requirements of the OSHA code. Some more specific requirements are:

1. When personnel enter a confined area, safety standby employees must be assigned who are alert to the work being done.
2. They are to be able to sound an alarm in necessary and to render assistance.
3. These standby employees must be trained to assist in handling lifelines, respiratory equipment, CPR, first aid, and be able to employee rescue equipment that will remove the individual from the confined area.
4. Standby personnel should be in teams of two during such an operation or else within the vicinity of working separately.
5. There must also be an effective communication system utilized while the operation is occurring.
6. When equipment which utilizes oxygen, such as a salamander, torches, or furnaces, are used in a confined space adequate ventilation must be provided to guarantee oxygen content and combustion for the equipment.
7. When oxygen utilizing equipment issued, adequate measures must be taken to assure that exhaust gases are vented outside the enclosure.
8. When gas welding or burning equipment is used, hoses must be checked for leaks, compressed bottled gas must be outside the area and torches lit outside the area also. The atmosphere must be tested each time before lighting a torch.
9. Specific lockout tagout procedures must be implemented to ensure the isolation of electrical or other potential energy sources. Isolation shall be double block in nature.
10. Specific safeguards, including entry and exit points, retrieval equipment (unless use of such equipment would hamper rescue efforts), fall protection (as appropriate), properly grounded electrical equipment shall be in place.
11. Warning signs shall be posted on entrances.
12. An emergency response plan shall be developed including rescue methods, designated rescue personnel, equipment to be used, communications methods, training required for rescue team members and special breathing equipment (SCBA's, etc.).

HAZARDS AND MITIGATING MEASURES

LSCC/ARSA's work, like any construction-related job, has hazards associated with the work practices and tools.

Preventative measures and common sense can keep accidents from happening. The worker must be aware of the hazards involved with the hazards of the job being performed, and any chemicals that may be used.

Electrical

Accidents involving electricity are very common in the United States. During asbestos abatement work, liquids such as encapsulant and surfactant are sprayed. In addition to bad footing, these substances provide electricity with an excellent path. There are many ways of reducing the chances of electrical accidents, among them are:

1. De-energize all electrical circuits into the work area, tag and lock the circuit breakers and electrical panel.
2. On all temporary power for lights and equipment, install ground fault circuit interrupters.
3. Consider dry removal in areas where electrical circuits and equipment must remain energized.
4. Supply worker with insulated rubber boots and/or gloves when working around energized equipment.
5. Use non-conductive (wood or plastic) scrapers, vacuum attachments, ladders and other equipment.
6. Avoid damaging insulation on wiring or electrical equipment.
7. Elevate electrical drop cords to keep them away from foot traffic, scaffolding, and liquids on floor.
8. Keep puddles (encapsulant, amended water etc.) from forming on the floor of the containment area.
9. Make sure that all electrical outlets are sealed.
10. Ensure that all workers know where electrical hazards are within the work area and outline specific countermeasures before starting the job.
11. Daily visual inspections of extension cords and plugged connected equipment for defects.
12. Consider all electrical circuits and wiring to be live unless already shut down and tested.
13. If you are not an electrician, never try to make electrical repairs. Call a trained electrician.
14. Never operate electrical equipment bearing a red tag.
15. A red electrical lockout tag may not be removed by anyone except the electrician who put it there.
16. A live wire looks the same as a dead one; insulation on a wire is no guarantee against shock. Call an electrician to find out if a wire is live or dead.
17. Never touch a person who is in contact with a live wire or cable with your bare hands. Turnoff the current if possible.

Use a long, dry stick to lift the wires off the victim. If he is on top of the wire, use a dry blanket as a loop to drag him off.

18. Never change fuses. Call an electrician to find out what caused the fuse to blow.
19. Never make adjustments on electrical equipment. Operate only the switches you are instructed to use. When in doubt, call an electrician.
20. Always turn off the circuit before changing a burned out light bulb.
21. Never open explosion-proof fixtures. Have an electrician do it for you.
22. Never store brooms, tools, rags or anything else in switch gear enclosures.
23. Electrical substations are off limits for everyone except electrical personnel.
24. Prior to using any extension cord or plug connected appliances, inspect the apparatus, power cord, receptacle and plug connected appliances, inspect the parts. Check for insulation that is frayed or deteriorated, and exposed conductors. Return any defective equipment to your supervisor. Tag as defective and turn in for repair.
25. Portable electrical tools used in wet or conductive locations shall be double insulated or used with ground fault circuit interrupters. Explosion proof lights are available for these applications.
26. Portable tools or appliances left unattended, should be unplugged (if not in use).
27. Always maintain 4 feet of clearance in front of all switch gear and motor control centers for emergency access. These spaces must be kept free and clear and must not be used as a storage area.
28. Only authorized personnel shall be permitted in electrical power distribution switch gear rooms and enclosures.
29. Before any power distribution switch gear is energized, re-energized, or closed, or engaged, it must be inspected by an electrician.
30. Breakers shall not be re-energized after tripping off. An electrician prior to energizing shall inspect them.

Slips and Falls

Chances of a slip or bad fall are greatly enhanced inside the containment area because of the extensive use of surfactant, encapsulant, chemicals and water. Double layers of plastic sheeting on the floor, even when dry, are very slippery and can shift underneath the feet without warning. When the abatement liquids and use of disposable boot covers is added, care must be taken to prevent slipping. It is imperative that the clean up crew keep the work area free from debris and accumulated liquids. Look over the area for obstacles and remove any tripping hazards.

Another area of concern are the ladders and scaffolding used during our work. These ladders and scaffolding must meet OSHA requirements and be inspected each day for damage, wear, and unsafe conditions. No improvised repairs should be made. Maintenance must be done correctly with proper parts. Ladders should never be used as walk boards or platforms. Scaffolding should be assembled from the proper parts with no improvisation allowed. Guardrails must be installed and the scaffolding must meet all OSHA requirements. Wheels should be locked down unless the scaffold is being moved. Personnel are not allowed on the scaffolding while it is in motion unless it is a self powered unit made to be driven between points.

Fire

IF FIRE OCCURS IN THE BUILDING GET OUT DO NOT STOP TO TURN OFF EQUIPMENT

During the set up phase of the job, workers must be made aware of the emergency and exiting procedures. In case of a fire, decontamination is forgotten in the face of the immediate danger to life. Fire exits (outside the containment barriers) should be identified, marked, and contingency plans made for emergency exits and lighting.

Prevention is always the best cure. Listed below are some tips that will decrease the chances of a fire.

1. Make sure that sources of ignition--pilot lights, equipment that makes sparks, etc. are removed or secured.
2. Fuel sources, such as gas or propane lines, should be shut down and secured.
3. Locate hot spots and potential fire hazards within the work area, correct, and make arrangements for periodic inspections.
4. Do not allow matches or lighters inside the work area. Prohibitions against smoking inside the work area will be strictly enforced.
5. When using cutting torches, open flames, or equipment that will emit sparks, a worker designated as the fire watch should be standing by with fire extinguishing equipment. (Do not use Carbon Dioxide fire extinguisher in a confined or enclosed space.)
6. When cutting into a wall make sure that you know what is in the wall and what is behind it.
7. Remove combustible materials from the work area before work starts.
8. Maintain the work area free of accumulated waste material.
9. Maintain fire extinguisher throughout the work area.
10. Clearly mark emergency exits. Post directional signs if necessary and provide emergency lighting.

Maintain a designated area outside the work area with a telephone (post emergency numbers) to call for fire or emergency equipment. The designated area should also have a fire alarm (a compressed air horn works well) that can be plainly heard inside the containment area.

In case a fire starts within the work area the extinguisher can be used to control it. Unless it is immediately apparent that the fire can be stopped with available extinguisher the workers should evacuate the area immediately (without decontamination). Non-essential personnel should be immediately evacuated through the decontamination stations with stopping for the decontamination procedures. Negative air systems should be shut down to minimize the amount of air available to feed a fire. If the fire begins to grow or is uncontrollable the workers should proceed to the nearest emergency exit, cut through the containment barrier and escape. **At no time should a worker stay behind if ordered out of the containment area.**

After the work area is evacuated all the workers should meet at the designated meeting area. Team leaders must account for each person in their team and report to the job supervisor. If a worker is unaccounted for rescue should not be attempted by the workers individually. Wait for the fire fighting personnel who have the proper equipment and training. It is important to remember disposable clothing is flammable and can melt, the plastic containment barriers will emit a toxic gas when burned, the fire will spread quickly, and abatement workers do not have the experience necessary for rescue without possible becoming another victim.

The barrier covering a fire exit must be plainly labeled and a razor knife taped to the plastic. Exit lighting, in case of power failure during a fire, should be operational and checked daily. In case of a fire in the work area workers would be able to cut through the plastic and escape through the emergency exit. After the fire is put out the worker can worry about the materials being removed again. The workers should also be aware that smoke kills more people than the fire, and while the respirator might filter some of the smoke, it isn't an oxygen mask. If there is a fire, the best air will be near the floor.

Heat Stress & Dehydration

Heat stress and dehydration are two major dangers for all workers. The asbestos abatement work requires that workers wear full-body disposable clothing and respirators. These are not comfortable under the best of conditions, but when combined with a hot boiler room and hard labor can become extremely hot. It is important that each worker become acclimated to the environment of the containment area gradually. Pushing too hard is the surest way to develop heat exhaustion or heat stroke. The workers should police themselves and ensure that they drink adequate quantities of water to replace body fluids lost on the job.

Heat Exhaustion

Symptoms: Fatigue, weakness, profuse sweating, pale clammy skin, headache, cramps, vomiting, dizziness, fainting.

Treatment: Remove worker from the hot area, lay them down and raise feet, apply cool wet cloths, loosen or remove clothing, allow small sips of water if victim is conscious and not vomiting.

Prevention: Frequent breaks, increased fluid intake, acclimatization to work area environment.

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluid intake, full body clothing, workers not acclimated to heat.

Heat Stroke

Symptoms: Dizziness, nausea, severe headache, hot dry skin, confusion, collapse, delirium, coma, death.

Treatment: Medical emergency, remove worker from hot area, remove clothing, lay them down, cool the body, contact emergency personnel.

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluid intake, full body clothing, not acclimated to heat.

Dehydration is another problem associated with asbestos abatement work. It is caused by insufficient fluid intake, coupled with the hot, sweaty work. Workers can guard against dehydration by drinking plenty of water every time they come out of the containment area. Each worker should also keep track of the number of times that they urinate during the day. They should urinate at least twice in a day, less than that means that they are not taking in enough liquid (alcohol does not count and can actually contribute to the dehydration).

Cold Related Injuries

Although cold related injuries might be expected in an Arctic environment there is actually a low incidence of such injuries. Proper clothing, knowledge of the effects of exposure and a self-protective attitude all contribute to prevention. There are basically two types of acute cold injuries: Hypothermia and Frostbite. Hypothermia is the lowering of the body core temperature to the point where it is no longer functioning properly. Symptoms include: Intense shivering, poor coordination, stumbling, and loss of memory, thickness of speech and drowsiness. Hypothermia is insidious and, left untreated, may result

in collapse and death.

Frostbite is the freezing of body tissue. It may range from minor injury ("frostnip") to complete freezing of an extremity. Untreated frostbitten areas will first become reddened, then become gray or white, particularly on exposed ear lobes, cheeks, or nose. Left untreated, the skin becomes numb and dead white.

For Hypothermia:

If victim is unconscious, maintain the airway.

10. Move the victim to shelter and warmth and remove victim's wet clothing. (Handle the victim very gently, as jerky movements of a cold person can stimulate cardiac arrest.)
11. If the victim is more than 15 minutes from a hospital, begin to add heat in the following manner:
 - a. Wrap warm, moist towels around the head, neck, sides and groin.
 - b. If no other source of heat is available, rescuer should use his body heat for rewarming.
 - c. Do not warm the extremities, give the victim warm water, place victim in a shower or bath, or rub the extremities.

For Frostbite:

1. Treat minor cases of frostbite (such as a fingertip) by rapid rewarming in warm water (104 F) or with warm, wet towels. Small patches of white, waxy-appearing skin are the first signs of frostbite. Only very small frostbitten areas should be rethawed without professional assistance.
2. Do not rub with snow, defrost by placing body parts in an oven, car exhaust or other source of high heat, or defrost slowly at room temperature.
3. Once defrosted, the affected part must be protected from refreezing.

Miscellaneous

Back and spine injuries are the most frequent ailments of workers. Many occur when one tries to lift too much by himself. It's recommended using handcarts or the "buddy system" to move large objects or heavy bags of waste material.

Anyone entering confined or enclosed areas (pipes, boilers, manholes, etc.) should check with supervisor or foreman to assess personal protection measures. Some examples are the following: lifelines, air movers, fans, breathing air masks, etc.

Storage of any material on the jobsite shall not obstruct exits and they will be stored with regards to their fire characteristics.

Employees will be familiar with LSCC/ARSA's Hazard Communication Program, knowing the chemical hazards, location of MSDS, container labeling, and receive initial training and be updated on introduction of any new hazards.

CURRENT SAFETY PROGRAM

Safety Mission

To prevent the occurrence of unsafe acts, conditions, and accidents in the workplace.

No job is so important or so urgent that you cannot take time to do it safely.

Safety Philosophy

All injuries can be prevented.

Safety must be the first consideration in all actions.

Supervisors are responsible for ensuring properly trained employees.

Employees are responsible for their individual safety.

Each employee shall know and follow the safety rules and procedures.

Each employee is responsible for ensuring that contractors and visitors comply with all Company safety regulations.

Each contractor will comply with all laws and Company safety regulations.

General Safety Rules

1. All injuries, no matter how slight, shall be reported as soon as possible to your supervisor and, if required, treated at a medical facility.
2. Fighting and horseplay are strictly prohibited on the job.
3. No work shall be started on any project without the knowledge and consent of the Owner or Contractor of the project.
4. All employees shall immediately report any unsafe conditions or practices to his supervisor.
5. Running in work areas, except for emergency purposes, is prohibited.
6. When ascending or descending stairways, use the handrail and take one step at a time.
7. Compressed air shall not be applied to clothing or body of self or others.
8. Steel tapes or shoes with any metal exposed on the sole are prohibited.
9. Finger rings, ear rings, loose clothing, wrist watches, and other loose accessories shall not be worn.

10. Hard hat protection and safety glasses are required in all designated areas.
11. When an employee is working in a location where they have the potential to fall more than 6 feet appropriate fall protection equipment shall be worn.
12. Every floor hole into which one can fall shall be guarded by either (a) a standard railing with toe boards on all exposed sides or (b) a floor hole cover of standard strength and secured so that it cannot be accidentally removed.
13. Before any non-routine work occurs, a supervisor will be designated. The supervisor will be responsible for conducting a job orientation for all workers involved in completing the work.

Housekeeping

1. All passageways, entryways, aisles, and work areas shall be kept clean and in good repair with no obstruction, orderly and sanitary and free of ice to prevent slipping and tripping injuries.
2. Floors shall be kept clean, free from protruding nails, splinters, holes and loose boards.
3. All waste and debris shall be removed from the work area and placed in receptacles or piled safely.
4. Aisles and walkways shall be kept clear of abrasives, which may create a slipping hazard.
5. Aisles shall provide unobstructed movement and immediate access by fire protection equipment.
6. Ground area around buildings and work areas shall be kept clean and free of unnecessary combustible material.
7. Combustible waste material and residue in buildings or work areas shall be kept to a minimum and disposed of daily.
8. Rags or waste containing combustible or flammable materials shall be disposed of daily.

Smoking

Smoking or carrying "strike anywhere" matches around the facilities, inside the containment area is strictly prohibited. Smoking is allowed only in designated "Smoking Areas". Employees shall not carry or use any matches except those which can be ignited only by friction on the container, or any lighters (Bic type) except those with a covered sparking mechanism.

Tools

Through the job, tools of all types and sizes are in use every day. Their purpose is to help you do a better job and to do it quickly and safely. Kept in good condition and used properly, tools will accomplish this purpose. Using defective tools or using tools improperly may result in an injury.

You are supplied with the tools you need to perform your work. Examine them before you use them. If they are defective or if you lose one, ask your supervisor for a replacement.

Most accidents associated with tool use can be avoided if the following rules are observed.

1. Keep all cutting tools in good condition. A sharp tool is less likely to slip.
2. Disconnect electric and air tools from their power source when using the chuck key or when not in use. Always bleed air from hoses before disconnecting them.
3. Light wrenches are for light work. Never use hammers on them.
4. Use the right tool for the job.
5. Use only tools that are in good condition.

Manual Handling of Materials

1. Do no lift any object that is difficult for you. Ask for help. Always recognize and know your lifting capacity. Both muscular and skeletal injuries can result from improper handling of materials.
2. Inspect the area and route over which the object is to be carried. Make sure there is proper clearance and nothing that may cause slipping and tripping.
3. Make sure the object is free of sharp edges, protruding nail points, splinters, or other hazards that may cause injury.
4. Apply basic principles of lifting and setting:
Use the muscles in the legs to lift rather than weaker back muscles.
 - a. Get a secure footing.
 - b. Bend at the knees and get close to the object.
 - c. Keep your back straight and bend slightly from the hips.
 - d. Take a firm, balanced grip.
 - e. Lift gradually by straightening the legs and keeping the back straight, not arched.
 - f. Do not twist your body while under strain. Shift your feet and turn your whole body.
5. Do not raise the object higher than your waist. Set it on a bench, then change grip and position for lifting higher.
6. Be sure that you can see over or around the object, particularly when going up or down stairs.
7. Do not let go before your partner has a firm grip on the object.
8. Gasp sacks or bags at opposite corners, lift to your waist, and rest momentarily on your hip and then swing up to your shoulder.

9. Grasp flat sheets at the balance point on the bottom with one hand and lace the other hand on the top edge to hold and steady it. Use gloves where there are sharp edges.
10. Use the proper two-wheeled handcart for transporting drums or large barrels.
11. Avoid confusion when two or more people move an object by having only one call the signals.
12. Wear the proper protection. At times, safety shoes and gloves are necessary. Hazardous material such as acids may require additional protection.

Storage of Materials

1. Material shall be piled or stacked neatly to avoid toppling over.
2. Keep cartons dry to avoid collapsing.
3. Use blocks to prevent rolling. Use planks between stacked rows of drums and barrels.
4. Cross-tie bags and sacks and use step-back procedure when stacking.
5. Shield lower bags against ripping when stacked.
6. Store lumber on stable foundation and cross-tie at intervals.
7. Do not lean sheet metal against walls or columns, but store on edge or on sleepers.
8. Provide access to equipment parts and stored machinery and keep the storage area clean.
9. Secure all gas cylinders with a chain or clamp and store upright. Do not expose to equipment traffic or heat.
10. Keep all hazardous liquid chemicals in the shipping containers until dispensed. Never stack, overcrowd, or damage the container.

Hazardous Materials

Respiratory protection shall be worn when working in areas of performing jobs which may result in exposure to hazardous materials above the recognized permissible level (TLV). Selection of the appropriate respiratory protective equipment is critical. Consult your supervisor for specific information.

Before working on projects make sure you know what gases or chemicals may be present at the job site. Your supervisor should obtain this information before you are dispatched to the job. Make sure you have received training in recognition of the gases present and the safety precautions to be taken before working at the job site.

An employee without appropriate respiratory equipment shall not attempt to rescue someone from a hazardous atmosphere.

Your work on the job site may bring you in contact with various chemicals. They exist in the form of liquids, solids, dust, fumes and vapors. They can all be handled safely by using common sense and good judgment and by following these simple rules:

1. When assigned to a particular job or work area, consult your supervisor regarding materials you may encounter.
2. Read and obey warning signs.
3. Read and follow printed instructions on containers. All materials should be marked with precautions for safe use and handling. If in doubt, consult the Material Safety Data Sheet manual found at the shop.
4. Protective clothing and equipment are required and available for any employee exposed to handling chemicals.
5. Many chemicals cause burns when they touch the skin or eyes. The most effective treatment is to flood the burned area with water for a minimum of 15 minutes. Before starting any work on chemical lines, pumps, etc., know the location of safety showers and place a portable eye wash station nearby.

Chemicals can be handled safely when the instructions are followed and the necessary protective equipment is used. If you are not sure what you are dealing with, or need more information, contact your supervisor.

Barricades

Barricades and guardrails are erected to protect you. Remember these points:

1. Always have barricades erected around hazardous areas. Be sure to have temporary lights installed when there is darkness.
2. Never disregard barricades. Even though the danger may not be apparent to you, they are there for a reason.
3. Erect barricades in areas of overhead work, hazardous work and hazardous storage.
4. Mark open holes or excavations well to adequately warn personnel in the event the hazard should later be filled or covered with snow.

Scaffold Safety

1. When you need scaffold for a job, ask to have it built. An accredited scaffolding person must erect all scaffolding.
2. Never use makeshift arrangements to reach high working areas.
3. Manufactured scaffolding shall be erected in accordance with the manufacturer's directions. At a minimum, scaffolds

shall be complete with guardrails, toe boards, braces and ladders before using.

4. If for justifiable reasons, scaffolding cannot be erected according to regulations or manufacturer's directions, a red hazard notification tag shall be attached.

Safe scaffolding has:

1. A sound footing capable of carrying the maximum intended load.
2. Guardrails on all sides; top rail 42" above work platform surface, mid-rail 21" above the work surface.
3. Toe-boards with a minimum height of 4" on all sides for scaffolding over 6 feet.
4. Side screens on side adjacent to passageways of thoroughfares to guard against falling materials or tools.
5. Scaffold decking which is in good condition and has a safety factor of four times the maximum load.
6. Scaffolding planking not extending less than 6" or more than 12" beyond their end supports, unless otherwise secured from being dislodged.
7. An access ladder secured to the scaffold. The distance from the centerline of the rung to the nearest object in back of the ladder shall not be less than 7".
8. Supports, poles, legs, or uprights that are plumb and securely braced.
9. Bracing at intervals of not more than 30' horizontally and 26' vertically, is secured and tied off.
10. A height not to exceed 3 times the shortest dimension of the base, without being secured to the adjacent structure or having the base dimensions increased.

Ladders

1. Select the right ladder for the job.
 - a. Make sure the ladder is strong enough for its intended use.
 - b. Choose a ladder that is long enough so you can work comfortably.
 - c. Do not use metal ladders when there is a chance of contact with a source of electric current.
2. Inspect the ladder before you use it.
 - a. Look for loose or damaged rungs, steps, rails or braces.
 - b. Repair or replace loose or missing screws, hinges, bolts, nuts or other hardware.
 - c. Make certain spreaders can be locked in place.
 - d. Be sure straight ladders have safety feet.
 - e. Never use a defective ladder.
3. Set up your ladder with care.
 - a. If you must set up a ladder in a traffic area, use a barricade or guard to prevent unexpected collisions. Lock or block any nearby door that opens toward you.
 - b. Keep the area around the ladder base uncluttered.
 - c. Avoid tilting by resting your ladder base on a solid, level surface.
 - d. When you use a stepladder, make sure it is fully open and its spreaders are locked.
 - e. Position a straight ladder at a four-to-one ratio. That means the base of your ladder is one foot away from the wall or other vertical surface for every four feet of the ladder length to the upper support point.
 - f. When you use a ladder to climb onto a roof or platform, allow your ladder to extend at least three feet beyond the roof edge or to the support point.
 - g. To avoid shifting, tie down straight ladders as close to the support point as possible.
 - h. Never lean a ladder against an unstable surface.
 - i. When working from a ladder, hold on with at least one hand. Never reach or lean too far to either side. To maintain your balance, keep your belt buckle between the ladder rails.
4. Climb and descend ladders cautiously.
 - a. Face the ladder and use both hands.
 - b. If you need tools, carry them in a tool belt or raise and lower them with a hand line.
 - c. Do not take a chance on slipping, check ladder rungs and the bottoms of your shoes for slippery substances.
 - d. Do not climb higher than the second tread from the top on a stepladder or the third rung from the top on a straight ladder.

EMERGENCY LIGHTING PLAN

The work area is located at the basement of the Federal Building, which has two water cooled 250 KW electrical generators. In case the main electricity is lost due to unforeseen problems such as an avalanche knocking down the power transmission lines, these two electrical generators will come on line within 14 seconds, and the power is restored. When the main electricity is restored by the Juneau Power and Electric Utility, these generators will stop. Because these two emergency generators are on site, battery pack emergency lights are not planned for installation on this project.

EXHIBIT 4

(65 Pages)

Submittal Index
PCB/Lead Containing Paint Abatement Procedures
PCB/Lead Mitigation
Federal Building
Juneau AK

1. Work Plan
2. Health and Safety Plan
3. Equipment, Supplies and MSDS Information

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PCB/Lead Containing Paint Abatement Procedures
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CONTRACTOR WORK PLAN PCB/LEAD PAINT REMOVAL

ABATEMENT WORK TO BE PERFORMED

Abatement will include the removal paint on floors and housekeeping pads and removal of the 3" concrete topping slab, removal of paint on a 3" strip on the exterior wall of the mechanical room and the columns in the mechanical room. Also to be removed are concrete housekeeping pads under mechanical equipment to be demolished within the mechanical room.

Chemical hazards include exposure to lead paint, PCB additives to the paint, agents in the paint remover and other chemicals, if used.

Physical hazards include heat, electricity and electrical equipment, lifting of heavy items, and equipment left in the mechanical room. Some of the equipment will be lifted off of the housekeeping pads and supported on struts off of the housekeeping pads. Care will need to be taken around all remaining equipment around which paint must be removed. Work will only be done around equipment which is securely stabilized.

PCB/LEAD SURVEY FOR LOCATIONS OF HAZARD

The survey indicates PCB/Lead paint on floor surfaces of the "topping slab" walls, housekeeping pads and support columns.

The hazards will be controlled by using wet removal methods for the paint, cutting and scraping of the paint. HEPA filtered exhaust machines will be used in the work area to capture any dust which may be emitted into the air. All waste will be placed in appropriate disposal containers (bags, drums or wrapped) upon removal.

Work areas within the mechanical room will be isolated using barrier tape during the removal of the paint from surface areas. The work areas will be coordinated with the Owners workers to provide the maximum access possible to equipment, which must be serviced, throughout the project.

PERMITS AND NOTIFICATIONS

Permits from Federal and State agencies are not required to remove lead paint of PCB materials. Permit and notification for movement of waste through Canadian waters is attached.

DESCRIPTION OF THE ABATEMENT WORK TO BE PERFORMED

PCB work will be done in accordance with applicable local, state, federal and applicable foreign regulations.

Paint containing PCB's and Lead will be removed using a commercial paint remover. MSDS information is included in this submittal. Paint will be removed by demarcating a

section of the mechanical room. This section will be up to one quarter of the room at a time. In necessary smaller areas may be done to accommodate the needs of the Owner.

Paint remover will be painted onto the surface of the floor, wall or column within the demarcated area. The remover will be allowed to set on the covered area for several hours until the paint is loose and can be wiped and scraped from the surface. In necessary a second coating of remover may be applied and the process repeated.

The waste products of the paint removal operation will be placed in drums, suitable for shipping to the waste facility, and stored in the mechanical room until moved to the disposal container. This disposal container will be an enclosed trailer or van supplied by Phillips Environmental. The storage unit will be locked at all times.

The concrete remaining shall be treated as containing PCB's. Tests taken indicate that the concrete topping pad and the housekeeping pads have absorbed PCB's into the substrate. All topping pad and housekeeping pad concrete is assumed to contain levels of PCB at levels which will require disposal in a regulated facility. The purpose of this project is to remove the designated concrete and transport it to the regulated facility.

Once the paint is removed the concrete will be cut into blocks for removal from the facility. Concrete cutting will be done using commercial concrete cutting equipment and using wet methods. All cutting will be done using water to prevent the escapement of silica dust. Residual water and concrete will be vacuumed up using HEPA filtered vacuums and placed in drums in the work area. The slurry will be allowed to settle and the water removed from the surface. Excess water will be pumped from the drums and filtered to remove particulates. The filtering system will consist of a series of four sock filters graduated down to 2 microns. After the particulates are removed the water will be filtered through two activated charcoal filters to remove any remaining lead or PCB particulates.

A test cutting will be done at the start of the project and samples of the waste water will be taken and analyzed to certify that the waste water is free of RCRA and TSCA wastes and safe to be discharged into the building waste water stream. These tests will specifically test for lead, PCB and other heavy metals which may be classified as RCRA or TSCA wastes.

After the concrete is cut it will be placed on pallets and lifted out of the mechanical room and placed in containers for shipping. The containers will be lined with two layers of 6 mil polyethylene and sealed when full. Waste shipment will be done by Phillips Environmental Services.

QUALIFICATIONS/CERTIFICATION/TRAINING CERTIFICATES OF EACH WORKER

As the hazard being abated is known the only special training need is Hazard Communication Training for Lead Paint and PCB's. All workers will have received this

training through White Environmental Consultants before the project begins. Certificates of completion for this training will be presented to the Owner before the project starts.

Additionally all workers will receive 24 hour of training in Hazardous Waste Handling and Management. A copy of the course outline is attached.

All ARSA workers have received respiratory protection training and have medical clearance for the use of respirators.

The documentation for the Competent person is attached to this document.

SUBCONTRACTOR QUALIFICATIONS

Phillips Environmental Services will be the transporter of the regulated waste for this project. A company profile for Phillips is attached to this document.

Voorhees Concrete Cutters will be doing any cutting of the topping slab as necessary. All workers of Voorhees will have received Hazard Communication Training and 24 hours of training in Hazardous Waste Handling and Management for this project.

AIR MONITORING PLAN

Air samples shall be collected and analyzed in accordance with the methods specified by the National Institute for Occupational Safety and Health (NIOSH) Method 5503 for airborne PCB concentrations and NIOSH Method 7105 for airborne concentrations of lead as required by DOLWD and OSHA.

It is expected that a small crew will be working on this project. The Contractor will conduct full shift personal exposure monitoring on 25% of the workers or at least two workers each day. Where multiple crews are working simultaneously at different locations, or on different tasks, at least one representative person on each crew will be monitored. Sampling will be conducted using personal sample pumps and 37 mm mixed cellulose ester filter cassettes, closed face. One sample will be taken for each sampled worker spanning the entire work shift. Work shifts are expected to be eight hours long. Lunch periods in non-contaminated areas will not be sampled, but break periods will be sampled. Pumps will be pre- and post-calibrated to approximately 2.0 liters per minute using a primary standard in accordance with good industrial hygiene practice. Sample cassettes will be fastened in the worker's breathing zone. Each sample will be run for approximately eight hours. Sample volumes will be approximately 1060 liters. Because LBP will be removed using wet methods, lead dust is not expected to be generated. Lead air sample cassettes are not likely to become overloaded during the full shift sample. However, multiple consecutive samples may be taken if there is any problem with filter loading.

Air monitoring for PCB's will be done using lead air filter cassettes. The Contractor will conduct full shift personal exposure monitoring on 25% of the

workers or at least two workers each day. Where multiple crews are working simultaneously at different locations, or on different tasks, at least one representative person on each crew will be monitored. Sampling will be conducted using personal sample pumps and 37 mm mixed cellulose ester filter cassettes, closed face. One sample will be taken for each sampled worker spanning the entire work shift. Work shifts are expected to be eight hours long. Lunch periods in non-contaminated areas will not be sampled, but break periods will be sampled. Pumps will be pre- and post-calibrated to approximately 2.0 liters per minute using a primary standard in accordance with good industrial hygiene practice. Sample cassettes will be fastened in the worker's breathing zone. Each sample will be run for approximately eight hours. Sample volumes will be approximately 1060 liters.

Laboratory analysis will be completed by a facility accredited by the American Industrial Hygiene Association. Upon receipt of analytical results the laboratory will calculate eight hour TWA's for sampled workers. If work shifts exceed eight hours, the total exposure will be compressed into eight hours for comparison with the PEL. The Contractor will provide all results to site workers within five days of receipt and will also submit copies to the Contracting Officer.

Airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926, Section 62. One sample shall be taken within the work area and one sample shall be taken outside of the mechanical room near an entrance to the room. In a similar fashion environmental air monitoring for PCB's will be conducted.

The Contractor will follow the Air Monitoring Plan throughout the course of the project. Any deviations from the plan will be submitted to the Contracting Officer for approval in advance.

PCB/LBP WASTE TESTING

Lead-containing waste from the project will be sampled before shipment to the waste disposal firm. Samples of the mixture of LBP and stripper will be spooned from each disposal drum into a glass screw top sample jar provided by the laboratory. Laboratory analysis of the waste will be by the toxicity characteristic leaching procedure in accordance with 40 CFR 261. Laboratory results will be provided to the waste disposal firm in advance of shipment of the waste.

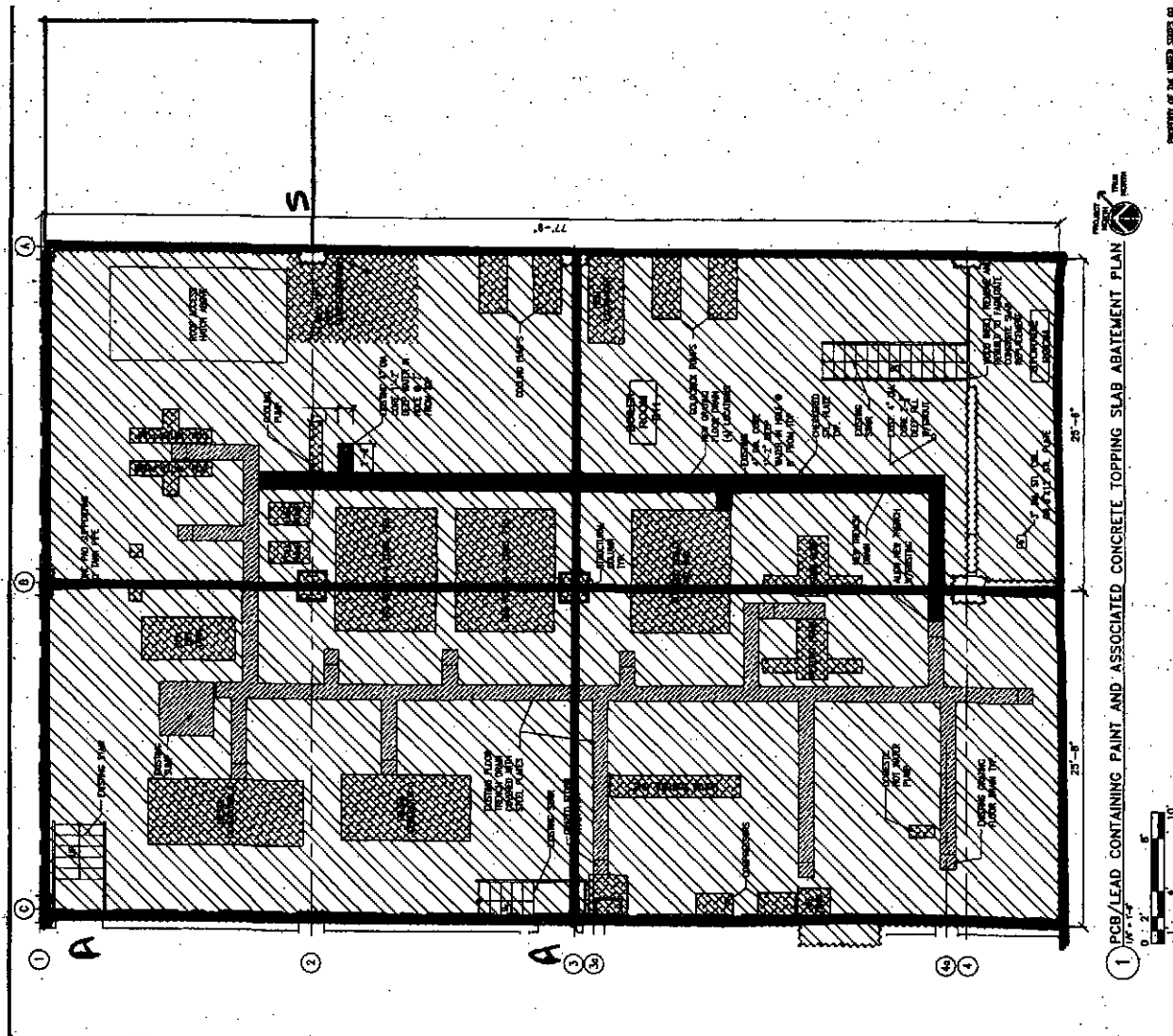
All PCB containing waste is assumed to be at levels in the contract documents. All wastes will be treated at the levels in the contract documents and disposed of accordingly.

Testing Laboratory

Qualifications for testing laboratories for PCB's and LBP are attached.

PCB/LBP SHEET NOTES

1. Mechanical room will be divided into four sections for removal of paint.
2. Access will be maintained through at least one door at all times for maintenance personnel
3. Negative exhaust machines will be placed near the work area during cutting of the topping slab. Exact location of the machines will depend on the location of the cutting and other non-movable equipment in the work area.
4. Paint will be remove using paint removers. MSDS included in submittal.
5. Decontamination station will be located outside of each work area. Decon station will be an area where workers can wash hands and face when leaving work area. Station will consist of a wash basin, poly layer on floor for changing clothing, disposal barrel for contaminated PPE.
6. Debris/waste will be stored at the roof access hatch until moved to the containers for shipment. Shipping containers will be located in the lay-down area (S) for the project.
7. Access to the work area, for contractor workers, will be through the two doors on the West side of the mechanical room.
8. Warning signs will be placed on all doors to the mechanical room during the paint and concrete removal.
9. All removal of paint and concrete, including concrete cutting, will be done using wet methods.
10. Arrangements will be made on the job site for maintenance personnel to enter the mechanical room during the project. During paint removal, if maintenance personnel must enter the work area, a polyethylene sheet will be laid down for access to equipment.
11. Safety equipment will be placed in the work area during the abatement process. Equipment will need to be moved as the work is done to accommodate the work.
12. **PCB work will be done in accordance with applicable local, state, federal and applicable foreign regulations.**





Larry Reiter
Philip Services Corp.
1813 E. 1st Ave., Suite 201
Anchorage, Alaska
United States of America
99501

17 March 2006 / 17 mars 2006

TRANSIT PERMIT FOR HAZARDOUS WASTE/HAZARDOUS RECYCLABLE MATERIAL

Issued Under Subparagraph 185(1)(b)(ii) of the *Canadian Environmental Protection Act, 1999*
PERMIS DE TRANSIT POUR DÉCHETS DANGEREUX/MATIÈRES RECYCLABLES DANGEREUSES

Délivré en vertu du sous-alinéa 185(1)(b)(ii) de la *Loi canadienne sur la protection de l'environnement (1999)*

File Number / No. de dossier : 06/00017/TRS

This TRANSIT PERMIT is issued to Philip Services Corp. in accordance with subparagraph 185(1)(b)(ii) of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) for the transit of the hazardous wastes/hazardous recyclable materials described below from the United States of America through Canada on route to the United States of America.

Le présent PERMIS DE TRANSIT est délivré à Philip Services Corp. en vertu du sous-alinéa 185(1)(b)(ii) de la *Loi canadienne sur la protection de l'environnement (1999)* (LCPE (1999)) pour le transit des déchets dangereux/matières recyclables dangereuses décrits ci-après des États-Unis d'Amérique par le Canada à destination des États-Unis d'Amérique.

This TRANSIT PERMIT is valid for the period of 17 March 2006 to 16 March 2007.

Ce PERMIS DE TRANSIT est valide du 17 mars 2006 au 16 mars 2007.

Waste/Material Description for 16 Hazardous Wastes/Hazardous Recyclable Materials / Description de déchet/matière pour 16 déchets dangereux/matières recyclable dangereuses

1) Q14/R01/L41/C42/H3/A950/Y42+46

PIN / NIP : UN1993

Class / Classe : 3

Quantity / Quantité : 2,000,000 kg

HS Code / Code HS : 2707.50.00.10

Notice / Notification : 502310

EIHWHRMR ID # :

No. d'identité REIDDMRD : F003

OECD Code / Code OCDE : A4060

Packing Group / Groupe d'emballage : I



- 2) Q14//R04//S25//C16//H8//A950//Y29+46
 PIN / NIP : UN2809 EIHWHRM ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 500,000 kg OECD Code / Code OCDE : A1030
 HS Code / Code HS : 2805.40.00.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 3) Q07//R04//S38//C22+24//H8//A950//Y35+46
 PIN / NIP : UN3028 EIHWHRM ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg OECD Code / Code OCDE : A1170
 HS Code / Code HS : 8506.10.10.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 4) Q07//R04//S38//C18+23//H8//A950//Y31+34
 PIN / NIP : UN2794 EIHWHRM ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg OECD Code / Code OCDE : A1160
 HS Code / Code HS : 8507.10.00.10 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 5) Q07//R04//L37//C22+24//H8//A950//Y35+46
 PIN / NIP : UN2795 EIHWHRM ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg OECD Code / Code OCDE : A1170
 HS Code / Code HS : 8507.80.90.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 6) Q14//R01//L12//C41//H3//A950//Y12+41+46
 PIN / NIP : UN1263 EIHWHRM ID # :
 Class / Classe : 3 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg OECD Code / Code OCDE : A4070
 HS Code / Code HS : 3209.90.00.20 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 7) Q04+05//D13//L41//C51+16+18//H13//A935//Y09+29+31
 PIN / NIP : UN3082 EIHWHRM ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : L036
 Quantity / Quantité : 20,000,000 kg Basel Code / Code Bâle : A4060
 HS Code / Code HS : 2710.19.20.22 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 8) Q07//D09//L41//C23//H8//A935//Y34+46
 PIN / NIP : UN1760 EIHWHRM ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A4090
 HS Code / Code HS : 2806.10.00.90 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310

- 9) Q07//D09//S41//C23//H8//A935//Y34+46
 PIN / NIP : UN1759 EIHWHRMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2810.00.00.20 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 10) Q14+12//D05//S10//C32//H12//A936//Y10
 PIN / NIP : UN2315 EIHWHRMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg Basel Code / Code Bâle : A3180
 HS Code / Code HS : 2710.91.99.00 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 11) Q14+12//D10//L10//C32//H12//A931//Y10
 PIN / NIP : UN2315 EIHWHRMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A3180
 HS Code / Code HS : 2710.91.99.00 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 12) Q14//D10//G36//C42+44//H0//A931//Y42+46
 PIN / NIP : UN1950 EIHWHRMR ID # :
 Class / Classe : 2.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2711.12.10.00 Packing Group / Groupe d'emballage : NA
 Notice / Notification : 502310
- 13) Q07//D09//L41//C24//H8//A935//Y35+46
 PIN / NIP : UN1719 EIHWHRMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A4090
 HS Code / Code HS : 2815.12.00.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 14) Q14//D05//L41//C39//H6.1//A935//Y03+39+46
 PIN / NIP : UN2810 EIHWHRMR ID # :
 Class / Classe : 6.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2918.90.10.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 15) Q14//D05//S41//C39//H6.1//A935//Y03+39+46
 PIN / NIP : UN2811 EIHWHRMR ID # :
 Class / Classe : 6.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2918.90.10.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310

16) Q04+05//D13//S41//C51+16+18//H13//A935//Y29+31+41
 PIN / NIP : UNE077 EIHWHMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : L036
 Quantity / Quantité : 2,000,000 kg Basel Code / Code Bâle : A1020
 HS Code / Code HS : 2805.40.00.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310

From / De:

Philip Services Corp.
 1813 E. 1st Ave., Suite 201
 Anchorage, Alaska
 United States of America
 99501

To / À:

Philip Services Corp.
 20245-77 th Ave. South
 Kent, Washington
 United States of America
 98032

5 Authorized Carriers / 5 Transporteurs Agréés

Alaska Marine Lines
 Northland Services Inc.
 Samson Tug & Barge

Alaska Railbelt Marine, L.L.C.
 Philip Services Corp.

**4 Ports of Entry, Exit and Customs Offices /
4 Points d'entrée, de sortie et bureaux de douane**

EN:Beaver Creek / Alcan
 EX:Abbotsford / Sumas

EN:Dixon Entrance (Marine Movements)
 EX:Exit from the Strait of Juan de Fuca
 (Marine Movements)

Please take note that it is your responsibility to ensure that the requirements set out in the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWHMR) made pursuant to CEPA 1999 are complied with during the time of the movement of the hazardous wastes/hazardous recyclable materials described in this permit while it is transiting through Canada. This includes, but is not limited to, ensuring that the authorized carriers of the hazardous wastes/hazardous recyclable materials described in this permit are insured in accordance with section 37 of the EIHWHMR.

Veuillez prendre note qu'il vous incombe de vous assurer que vous respectez, lors du transit des déchets dangereux/matières recyclables dangereuses décrits dans ce permis transitant le Canada, les exigences établies dans le *Règlement sur l'exportation et l'importation de déchets dangereux et de matières recyclables dangereuses* (REIDDMRD) pris en vertu de la LCPE (1999). Ces exigences comprennent notamment l'obligation de vous assurer que les transporteurs agréés des déchets dangereux/matières recyclables dangereuses décrits dans ce permis, détiennent une police d'assurance conformément à l'article 37 du REIDDMRD.

It is your responsibility to ensure that you are in compliance with all other applicable Canadian laws.

Vous devez vous assurer de respecter toutes les autres lois canadiennes applicables.

The transit of hazardous wastes or hazardous recyclable materials, in violation of CEPA 1999 or the EHWHRMR, may be prosecuted as an offence under section 272 or 273 of CEPA 1999.

Tout transit de déchets dangereux ou de matières recyclables dangereuses qui contrevient à la LCPE (1999) ou au REIDDMRD peut entraîner une poursuite pénale en vertu de l'article 272 ou 273 de la LCPE (1999).

Signed for and on behalf of the Minister of the Environment /
Signé au nom du ministre de l'Environnement



France Jacovella, ing. P.Eng.
Director / Directrice
Waste Management Division / Division de la gestion des déchets
Pollution Prevention Directorate / Direction générale de la prévention de la pollution
Environment Canada / Environnement Canada

NOTICE - NOTIFICATION


Notice Reference No. - N° de référence du notification
502310Administrative form for proposed movement of hazardous waste or hazardous recyclable material
Formulaire administratif en vue des mouvements de déchets dangereux ou matières recyclables dangereuses

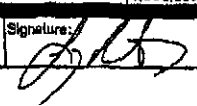
Pg. 1 of 4

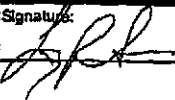
1 OPTION Indicate the option that applies to the notification / Indiquez l'option qui s'applique à la notification <input type="checkbox"/> Deposit / Dépôt <input checked="" type="checkbox"/> Recycling / Recyclage <input type="checkbox"/> Recycling, Pre-approved Facility / Recyclage, Installation approuvée au préalable			
2 EXPORTER OR FOREIGN EXPORTER EXPORTATEUR OU EXPORTATEUR ÉTRANGER		3 FOREIGN RECEIVER OR IMPORTER DESTINATAIRE ÉTRANGER OU IMPORTATEUR	
Registration Number: N° d'immatriculation: AKO 983068602		Registration Number: N° d'immatriculation: WAD 991201767	
Name: Nom: PHILIP SERVICES CORP.		Name: Nom: PHILIP SERVICES CORP.	
Address: Adresse: 1813 E. 1st Ave ANCH, AK 99501		Address: Adresse: 20245 77th Ave. S. KENT, WA. 98032	
Tel. No.: N° de tél.: (907) 272-9007		Tel. No.: N° de tél.: (253) 872-8030	
Fax No.: N° de tél.: (907) 272-6805		Fax No.: N° de tél.: (253) 395-0377	
E-mail address: Adresse électronique: reuter@pscorp.com		E-mail address: Adresse électronique: chris@pscorp.com	
Contact person: Personne ressource: LARRY REITER		Contact person: Personne ressource: CHRIS DIETRICH	
Name of Insurance Company: Nom de l'assureur: FRANK CRYSTAL & CO OF TX		Name of Insurance Company: Nom de l'assureur: FRANK CRYSTAL & CO OF TX	
Policy No.: N° Police: XSLG21713867		Policy No.: N° Police: XSLG21713867	
4 CARRIER TRANSPORTEUR		5 AUTHORIZED FACILITY (IF OPERATION D13, D14, D17, R12, R13, R18) INSTALLATION AGRIÉE (DANS LE CAS DES OPÉRATIONS D13, D14, D17, R12, R13 OU R18)	
Registration Number: N° d'immatriculation:		Registration Number: N° d'immatriculation:	
Name: Nom: SEE ATTACHED LISTS		Name: Nom: N/A	
Address: Adresse:		Address: Adresse: N/A	
Mode of Transport: Mode de transport: <input type="checkbox"/> Road / Route <input type="checkbox"/> Rail / Rail <input type="checkbox"/> Marine / Mer <input type="checkbox"/> Air / Air		Receiving Site Address: Adresse du site de réception:	
If other carriers used, attach a list. Si y a d'autres transporteurs, joignez une liste. <input type="checkbox"/> Attached / ci-joint		<input type="checkbox"/> Attached / ci-joint	
Tel. No.: N° de tél.:		Tel. No.: N° de tél.:	
Fax No.: N° de tél.:		Fax No.: N° de tél.:	
E-mail address: Adresse électronique:		E-mail address: Adresse électronique:	
Contact person: Personne ressource:		Contact person: Personne ressource:	
Name of Insurance Company: Nom de l'assureur:		Name of Insurance Company: Nom de l'assureur:	
Policy No.: N° Police:		Policy No.: N° Police:	

SHIPPING DETAILS - DÉTAILS SUR LES ENVOIS

6 NUMBER OF EXPORTS OR IMPORTS NOMBRE D'EXPORTATIONS OU D'IMPORTATIONS: 100		7 Port of Exit / Entry or Customs Office(s) Bureau(s) de douane ou Point de sortie / d'entrée: Attached - ci-joint	
8 FIRST AND LAST SHIPMENT: PREMIER ET DERNIER ENVOI: FIRST PREMIER 016 012 114 LAST DERNIER 017 012 114			
9 TRANSIT COUNTRY (IES) PAYS (S) DE TRANSIT: Country: N/A Length of Stay: TRANSIT ONLY		Attached - ci-joint	
10 Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'Identification des déchets		Based Annex 1 or OECD App. 4 code / Annex 1 Code Bâse au App. 4 Code OCDE	
UN 1993		3 2,000,000 kg	
Customs Code Code de douane: 2707.50.00 10		10 No & Description of Sch. 5-7 N° d'Id et description du Ann. 5 à 7: F003	
POP name, quant. & conc. POP nom, quant. & conc.: N/A		Description of the DMR process to be used Description du processus DMR mis en œuvre: ENERGY RECOVERY	
11 EXPORTS OF HAZARDOUS WASTE: Options considered for reducing or phasing out the waste and the reason the disposal is happening outside of Canada. EXPORTATION DE DÉCHETS DANGEREUX: Solutions envisagées pour réduire ou pour supprimer les déchets et les raisons pour l'élimination en lieu étranger N/A			
12 STATEMENT OF PERSON SUBMITTING THE NOTICE: In the case of an export or import, the contract(s) referred to in paragraph 9(1) or 10(1) shall be in force and if the waste or material cannot be recycled in accordance with the export or import permit, the exporter or importer will undertake alternative arrangements required under the Regulations or will return the waste or material to the facility from which it was imported in accordance with s. 34 or 35. In the case of an export, import or transit, the insurance policy will cover the period specified by the Regulations and the information in the notice is complete and correct. DÉCLARATION PAR L'AUTEUR DE LA NOTIFICATION: Dans le cas d'une exportation ou d'une importation, le contrat(s) visé(s) aux articles 9(1) ou 10(1) est en vigueur et si les déchets ou matières ne peuvent être recyclés conformément au permis d'exportation ou d'importation, l'exportateur ou l'importateur devra entreprendre les mesures de transport prévues à l'article 34 ou 35. Dans le cas d'une exportation, importation ou transit, la police d'assurance sera en vigueur pendant la période spécifiée par le Règlement, et les renseignements figurant à la notification sont complets et exacts.			
Name: Nom: LARRY REITER		Signature: [Signature] Date: 06/02/14	
Tel. No.: N° de tél.: (907) 272-9007			

Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets		Basel Annex VIII or OECD App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/R4/S25/C16/H8/A850/Y29+46		A1090	UN2808	8	600,000 kg	L PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.		Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2808.40.00 00	N/A	N/A		Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets		Basel Annex VIII or OECD App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S33/C22+24/H18/A850/Y35+48+24		A1170	UN3028	8	100,000 kg	L PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.		Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
8808.10.10 00	N/A	N/A		Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets		Basel Annex VIII or OECD App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S38/C16+23/H18/A850/Y31+34		A1160	UN2794	8	20,000 kg	L PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.		Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
8507.10.00 10	N/A	N/A		Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets		Basel Annex VIII or OECD App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S38/C22+24/H18/A850/Y35&46		A1170	UN2798	8	20,000 kg	L PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.		Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
8507.80.90 00	N/A	N/A		Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets		Basel Annex VIII or OECD App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/R1A.12/C41/H3/A850/Y12+48+41		A4070	UN1283	3	1,000,000 kg	L PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.		Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
3208.90.00 20	N/A	N/A		Energy recovery		
Name: Nom: Larry Rafter		Signature: 		Date: 06/2/14	Telephone No: N° de tél.: 907-272-9007	

Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
D4+6/D13/L41/C51+16+18/R113/A835/Y9+31+28	A4080	UN3082	9	20,000,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.18.20.22	L86, L17, U019	N/A	Blending or mixing prior to any operations D1 to D12		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
C7/D8/L41/C23/R18/A835/Y34+48	A4090	UN1760	8	1,000,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2808.10.00.90	N/A	N/A	Physical or chemical treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
C7/D8/L41/C23/R18/A835/Y34+48	A4140	UN1769	8	100,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2810.00.00.20	N/A	N/A	Physical or chemical treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14+12/D5/S10/C32/R12/A835/Y10	A3180	UN2315	9	100,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.91.99.00	N/A	POP 9 Polychlorinated Biphenyls 10,000 Kg 150,000 PPM	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14+12/D10/L10/C32/R12/A831/Y10	A3180	UN2315	9	1,000,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.91.99.00	N/A	POP 9 Polychlorinated Biphenyls 1,000,000 Kg 150,000 PPM	Incineration of land		
Name: Nom:	Signature: 	Date: 06/2/14	Telephone No: N° de tél.: 907-272-8007		

Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets	Basel Annex VIII or Decd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/D10/G36/C42+44/H4/A931/Y42+48	A4140	UN 1950	2.1	20,000 kg	N/A
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D?R mis en oeuvre		
2711.12.10 00	N/A	N/A	Incineration at Land		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets	Basel Annex VIII or Decd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/D9/L41/C24/H8/A935/Y35+48	A4080	UN1719	8	1,000,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D?R mis en oeuvre		
2815.12.00 00	N/A	N/A	Physical or Chemical Treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets	Basel Annex VIII or Decd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/D5/L41/C39/H6.1/A935/Y3+48+39	A4140	UN2810	6.1	20,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D?R mis en oeuvre		
2918.90.10 00	N/A	N/A	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets	Basel Annex VIII or Decd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/D5/S41/C39/H6.1/A935/Y3+48+39	A4140	UN2811	6.1	20,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D?R mis en oeuvre		
2918.90.10 00	N/A	N/A	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets	Basel Annex VIII or Decd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q4+Q8/D13/S41/C51+18+18/H13/A935/Y41+31+28	A1020	UN3077	9	2,000,000 kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D?R mis en oeuvre		
2805.40.00 00	L36, L17, U019	N/A	Blending or mixing prior to any operations D1 to D12		
Name: Nom:	Signature:	Date:	Telephone No: N° de tel.:		
Larry Reller		06/2/14	907-272-9007		

5

Customs Offices
Bureaux de douane

Entry into Canada: **Dixon Entrance B.C., Beaver**
Entrée au Canada : **Creek Y.T., Pleasant Camp B.C.**

Exit from Canada: **Strait of San Juan De Fuca B.C.**
Sortie du Canada : **Abbotsford B.C., Beaver Ck. Y.T.**

Others:
Autres :

**CARRIER
TRANSPORTEUR**

Registration Number: AKD 070 973 300 and WAD 070 973 300
N° de licence ou de permis:

<p>Name: Nom:</p> <p>Alaska Marine Lines</p> <p>Address: Adresse:</p> <p>7100 Second Avenue South PO Box 24248 Seattle, WA 98106</p>	<p>Mode of Transport: Mode de transport:</p> <p><input type="checkbox"/> Road / Route <input type="checkbox"/> Rail / Rail <input checked="" type="checkbox"/> Marine / Mer <input type="checkbox"/> Air / Air</p> <p>If other carriers used, attach a list. S'il y a d'autres transporteurs, annexez une liste</p> <p><input type="checkbox"/> Attached / ci-joint</p>
<p>Tel. No.: N° de tel.:</p> <p>206-763-4244</p>	<p>Fax No: N° de telec.:</p> <p>206-764-5782</p>
<p>E-mail address: Adresse electronique:</p> <p>nats@aml.lynden.com</p>	<p>Contact Person: Personne ressource:</p> <p>Natalie Stephenson</p>
<p>Name of Insurance Company: Nom de l'assureur:</p> <p>Marsh USA Inc.</p>	<p>Policy No: N° Police:</p> <p>HDOG21713703</p>

TRAINING

TRAINING FOR HAZARDOUS WASTE OPERATIONS AND HANDLING WILL BE GIVEN IN THE WEEK OF SEPTEMBER 18, 2006. CERTIFICATES FOR THIS TRAINING WILL BE MADE AVAILABLE TO THE OWNER AT THE END OF THE TRAINING.

ADDITIONAL HAZARD COMMUNICATIONS TRAINING MEETING THE REQUIREMENTS OF 29 CFR 1910.1200 WILL BE GIVEN TO ALL WORKERS ON THE PROJECT. THIS TRAINING WILL BE PROVIDED BY MATT WHITE (CIH) OF WHITE ENVIRONMENTAL CONSULTANTS. THIS TRAINING WILL BE JOB SPECIFIC AND DONE AT THE OFFICES OF ASBESTOS REMOVAL SPECIALISTS OF ALASKA.

206 E. Fireweed Lane, Suite 201
Anchorage, Alaska 99503
907-272-8852/907-272-0319(fax)

24 HOUR EMERGENCY RESPONSE TECHNICIAN

Course description:

This 24 hour seminar is designed to meet the training requirements of OSHA 29 CFR 1910.120(q)(iii), and includes pertinent information from the EPA 40 CFR. This course ensures each student has a thorough understanding of the potential hazards to health and safety associated with emergency response and the halting of the source of the release. The class covers information through lectures, films, and hands-on workshops. Students also learn how to use personal protective equipment and air monitoring instruments, toxicology, decontamination, emergency response and spill containment.

Outline:

- Introduction
- Glossary and Acronyms
- Regulatory Overview
- Hazard Communication
- Hazard Evaluation
- Toxicology and Hazards
- Medical Surveillance Training
- Air Monitoring Requirements
- Hazard Control
- Personal Protective Equipment
- Respiratory Training and Fit Test
- Decontamination
- Site Characterization and Control
- Emergency Response Plans
- NIOSH Pocket Guide

When: As Scheduled
Where: EMI Facility or
Statewide, AK

Includes hands-on training.

Who should attend:

All site workers engaged in hazardous substance release control or other activities that expose them to hazardous substances and health hazards and their managers and supervisors.

Cost: \$390.00 in Town

Contract: Outside Anchorage

Environmental Management Inc. is authorized to offer this training by the Alaska Commission on Post-Secondary Education.

Hazardous Waste Operations and Emergency Response Training Student Manual Table of Contents

<u>Unit-Section</u>	<u>Title</u>	<u>Pages</u>
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3	Hazards and Toxicology	
3 - 1	Types of Hazards.....	1 - 8
3 - 2	Chemical Health Hazards.....	1 - 20
3 - 3	Chemical Physical Hazards.....	1 - 9
3 - 4	Physical Agents and Other Physical Hazards.....	1 - 21
4	Publications and Source Documents.....	1 - 23
5	1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER).....	1 - 12
6	Monitoring.....	1 - 9
7	Personal Protective Equipment.....	1 - 3
7 - 1	Respiratory Protection.....	1 - 19
7 - 2	Chemical Protective Clothing.....	1 - 10
8	Decontamination.....	1 - 7
9	Safe Work Practices.....	1 - 7
10	Emergency Response.....	1 - 6
11	Laws & Regulations.....	1
	Agencies & Regulatory Authority.....	2 - 3
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	Units of Measurement.....	6
	Glossary.....	7 - 30

Class Evaluation

Alaska West Training Center

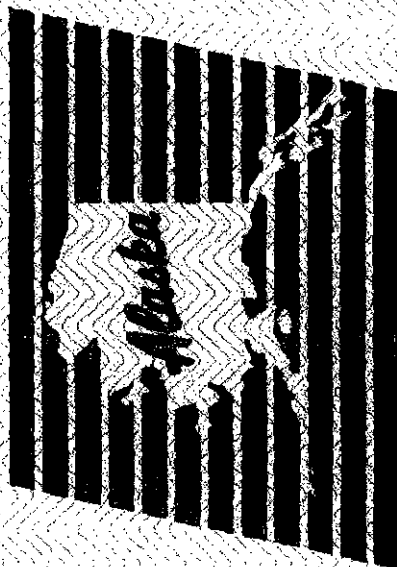
Certifies that:

John H. Abrams

has satisfactorily completed 8 hours of

ER03 - Hazardous Materials Technician Annual Refresher

29 CFR 1910.120(q)(8)



Date: November 3, 2005

Expiration Date: November 3, 2006

1095 Sanduri Street, Fairbanks, AK 99701 (907) 456-2223

<http://www.awtc.lynden.com> awtc@lynden.com

Instructor:

James K. Maltby

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

I - 9863 - 4393
Certificate Number

This is to certify that

Amor Diego

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006 Class End Date: 9/22/2006

9/22/2006 9/22/2007
Exam Date Cert. Exp. Date


Kay Aughe

Stuart M. Jacques
Director

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9863 - 6990

Certificate Number

This is to certify that

Christopher J. Bodle

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006

Exam Date

9/22/2007

Cert. Exp. Date

Stuart M. Jacques

Director

Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

I - 9863 - 10307

Certificate Number

This is to certify that

Barry W. Bodle

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006


Exam Date

9/22/2007

Cert. Exp. Date

Stuart M. Jacques

Director


Karl D. Gagne

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9863 - 10980
Certificate Number

This is to certify that

Larry S. Gilbert

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006
Exam Date

9/22/2007
Cert. Exp. Date

Stuart M. Jacques
Director


Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

I - 9863 - 10982

Certificate Number

This is to certify that

Jon A. Gustafson

has satisfactorily completed 24 hours
of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006

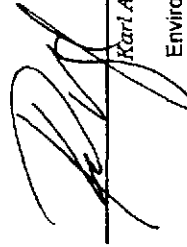
Exam Date

9/22/2007

Cert. Exp. Date

Stuart M. Jacques

Director


Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9863 - 10983

Certificate Number

This is to certify that

John J. Middleton

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006
Exam Date

9/22/2007
Cert. Exp. Date

Stuart M. Jacques

Director

Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201 Anchorage Alaska 99503 907-272-8852

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9863 - 10308
Certificate Number

This is to certify that

Josiah J. Thurneau

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006 Class End Date: 9/22/2006

9/22/2006 9/22/2007
Exam Date Cert Exp. Date

Stuart M. Jacques

Director

Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201 Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

I - 9863 - 4394

Certificate Number

This is to certify that

Erin J. Vincent

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

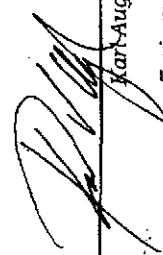
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9/22/2006
Exam Date

9/22/2007
Cert. Exp. Date

Stuart M. Jacques
Director


Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

I - 9863 - 10979
Certificate Number

This is to certify that

Robert F. Bostic

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006


Karl Aughe

9/22/2006
Exam Date

9/22/2007
Cert. Exp. Date

Stuart M. Jacques
Director

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9863 - 10978
Certificate Number

This is to certify that

Joe P. Voorhees

has satisfactorily completed 24 hours

of

Hazardous Waste Operations & Emergency Response - 24 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 9/20/2006

Class End Date: 9/22/2006

9/22/2006
Exam Date

9/22/2007
Cert. Exp. Date

Stuart M. Jacques
Director

Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T-9912-10979

Certificate Number

This is to certify that

Robert F. Bostic

has satisfactorily completed 2 hours

of

Lead Awareness

In compliance with 40 CFR 745 and 29 CFR 1926.62

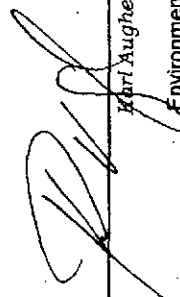
Class Start Date: 9/21/2006

Class End Date: 9/21/2006

9/21/2006
Exam Date

9/21/2007
Cert. Exp. Date

Stuart M. Jacques
Director


Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852



ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T-9912-10978

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This is to certify that

Joe P. Voorhees

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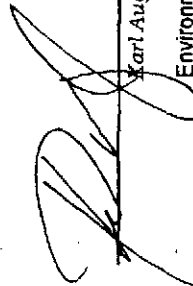
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Class End Date: 9/21/2006

9/21/2006
Exam Date

9/21/2007
Cert. Exp. Date

Stuart M. Jacques
Director


Karl Aughe

Environmental Management Inc. 206 E. Fireweed Lane Suite 201 Anchorage Alaska 99503 907-272-8852

COMPETENT PERSON

**Amor Diego
3045 1A Davis Road
Fairbanks AK 99709
907-530-0889**

This is to certify that Amor Diego, an employee of Asbestos Removal Specialists of Alaska, Inc., is a competent person designated for overseeing Asbestos Removal, Lead-Based Paint Abatement, and Hazardous Waste Operations and Emergency Responses.

Erin has completed Asbestos Abatement Course #19991063, and Lead Abatement Course for Supervisors. Amor has worked for Asbestos Removal Specialists of Alaska for since 1996. Amor's experience includes many projects with asbestos removal, reinstallation, demolition, lead abatement and carpentry work. Amor has worked on remote projects and understands the importance of logistical support and planning for these projects.

Amor is experienced in all phases of Asbestos abatement, transportation of asbestos and hazardous materials, air monitoring and quality control.

Amor is assigned the task of identifying existing asbestos hazards in the work place and given he authority to take prompt corrective measures to eliminate them. His duties shall include the following:

1. Establishing the negative pressure enclosure, ensuring its integrity, and controlling entry to and exit from the enclosure;
2. Supervising any employee exposure monitoring required by the regulations;
3. Ensuring that all employees working within such an enclosure wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in the regulations;
4. Ensuring that engineering controls in use are in proper operating conditions and are functioning properly;
5. Supervising the removal of ACM from the project using methods specified in the specifications and following Federal and State regulations;
6. Enforcing the Company Safety Policies and consistently monitoring safety practices on the job site;
7. Keeping records of the project as needed to ensure quality control, and meet all Federal, State and specifications requirements.

In Hazardous Waste Operations and Emergency Response projects Amor is responsible for:

1. Establishing the required control zones, ensuring their integrity and controlling entry to and exit from the control zones;
2. Supervising any employee exposure monitoring required by the regulations;
3. Assessing the site for hazardous materials and identifying potential hazardous materials on the site;
4. Initiating the appropriate response action to any identified hazardous materials found in the job site. Initiating the appropriate response action to protect other trades working in the area prior to the removal of hazardous materials from the job site;
5. Ensuring that all employees working within the control zones wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in the regulations;
6. Ensuring that engineering controls in use are in proper operating condition and are functioning properly;
7. Supervising the removal of the Hazardous Materials from the project using methods specified in the specifications and following Federal and State regulations.
8. Enforcing the Company Safety Policies, and the Job Site Specific Safety Policies, and following Federal and State regulations.

9. Keeping records of the project as needed to ensure quality control and meet all Federal, State, and specification requirements.

In Lead-Based Paint Abatement operations Amor is responsible for:

1. Recognizing the measures necessary to protect the building occupants. Establishing the required control zones, ensuring their integrity and controlling entry to and exit from the control zones;
2. Identifying and implementing the steps required in the abatement site preparation. This includes establishing the proper engineering controls for worker, occupant and building protection. Establishing all hygiene facilities and practices for the project;
3. Understanding and working with the complexities of occupant relocation and the temporary storage of occupant's furniture and supplies;
4. Implementing the proper containment techniques using the proper materials to construct the containment area. Test containment areas for integrity and insure proper ventilation;
5. Identifying the methods to minimize the debris to be disposed of which will contain lead dust;
6. Recognizing the scope of the abatement project and select the proper procedures for the specific project;
7. Understanding and supervise the procedures for clearance testing;
8. supervising any employee exposure monitoring required by the regulations;
9. Enforcing the company safety Policies and consistently monitoring safety practices on the job site;
10. Keeping all on-site abatement records.

PAST PROJECTS:

Kaltag School Renovations 2004
Liquidation Sales Building Demolition 2004
Consolidated Freight Fire Proofing Removal 2004
Golden Heart Utilities Lift Stations 2004
Nulato School Boiler Replacement 2004
Skip Johnson House Demolition 2004
Alcan Border Station Mechanical Repairs 2004

Fairbanks Memorial Hospital Tile Removal 2003
Wood Center Upgrades 2003
Denali Park Hotel Demolition 2003
Tanana Valley Clinic Remodel 2003
Ben Eielson High School Roof 2003
Assembly of God Church Reside 2003

Voorhees Concrete Cutting Specialists
4601 Tolovana Drive
Fairbanks, Alaska 99709

Asbestos Removal Specialists
Attn; John Abrams

Ref; Company Resume

1983 Voorhees Construction began as a sub contractor on projects at Ft. Wainwright, Alaska. We provide concrete, concrete cutting, carpentry and painting.

1990 Voorhees Concrete Cutting Specialists was formed and specialized in all types of concrete cutting, wall sawing, core drilling, slab sawing and concrete demolition.

Employees. We utilize the Laborers and Concrete Finishers Unions. We use apprentices to train as concrete cutters which takes 2 seasons. Our main crew consists of 4 experienced cutters and 2 to 3 apprentices during the construction season.

Job History. Some of the most recent large contracts and contractors we have worked for.
NOTE; We have 2 trucks that do service work and each truck will average 18 different small jobs per week.

Fairbanks, Alaska Memorial Hospital, Johnson River Enterprises.
Fairbanks, Alaska International Airport, Exclusive Landscaping and Paving.
Eielson A.F.B. Alaska Hush House, Exclusive Landscaping and Paving.
Fairbanks Alaska Airport Road Signalization, Great Northwest Inc.
Fairbanks Alaska College Road Lighting, H&H Contractors
North Pole Alaska Safeway, Roger Hickie Construction
Weather Shelters, Eielson AFB Alaska. Osborne Construction
Fairbanks Alaska Sams Club, Catamount Constructors
Travis AFB California Hydrant Refueling, Napa Group
New York Air Guard Taxiway, Napa Group
Nome Alaska Regional Hospital, Alcan Builders.
Nome Alaska Regional Hospital, Western Mechanical.
Elmendorf A.F.B Alaska Weather Shelters, Kiewit Pacific
University of Alaska Fairbanks Bunnell Building, Osborne Construction
Fairbanks Alaska West Valley High School, Alcan General
Fairbanks Alaska Hutchison Career Center, Alcan General.
North Pole Alaska Refinery, Jaffa Construction.
North Pole Alaska Power Station, Golden Valley Electric.
Ft. Wainwright Alaska Power House, Jaffa Construction.
Eielson A.F.B Alaska Power House, Jaffa Construction.
Eielson A.F.B. Alaska Power House, HC Price Co.



ENVIRONMENTAL SERVICES DIVISION

WASTE SERVICES - ALASKA

STATEMENT OF QUALIFICATIONS

" We partner with established Alaskan business leaders who strive for environmental excellence and select PSC for our exceptional service reputation. We provide comprehensive waste management, environmental and industrial maintenance solutions "

Submitted to:

***Asbestos Removal Specialists of Alaska
3049 Davis Road
Fairbanks, Alaska 99709***

Submitted by:

***PSC
Industrial Services Division
Waste Services - Alaska
1813 East First Avenue, Suite 101
Anchorage, Alaska 99501-1833
Ph (907) 272-9007 Fax (907) 272-6805 AK (800) 478-9008***

Scope of Services Overview

Burlington Environmental Inc., a wholly owned subsidiary of Philip Services Corporation (PSC) was formed in 1970 under the name of Chemical Processors (CHEMPRO) and has maintained a full time office within Alaska since 1988. PSC is the largest hazardous waste management company in the Northwest, emphasizing proper and environmentally safe management of resources and wastes. As a full service company, PSC is fully equipped to furnish all labor, trained personnel, materials, tools, equipment, supplies, support services, management and supervision necessary to provide hazardous waste management services.

With 18 Treatment, Storage and Disposal Facilities (TSDFs) as well as an extensive transportation fleet, PSC has the expertise, experience and flexibility to handle large and small generators of hazardous waste. We believe that our Alaskan and Pacific Northwest facilities, staff, and equipment fleet offers the perfect combination to handle the various waste streams generated in Alaska.

The Waste Services business unit of PSC's Industrial Services Division is responsible for our TSDFs as well as the operation of our hazardous waste transport fleet. Our fleet typically logs over one million miles per year and is licensed in all 50 states and Canada. The Alaska Division of this business unit performs a full range of Industrial and Environmental services including hazardous and non-hazardous waste handling, industrial cleaning, and spill clean up. No other company operating in Alaska matches PSC's experience in providing this service.

PSC's TSDFs offer a complementary range of services. All are equipped with in-house laboratories for waste analysis and fingerprint services. As an overall support to our TSDFs, our company operates a corporate laboratory that performs compliance quality control/quality assurance (QA/QC) testing. PSC also maintains contracts with fully permitted hazardous waste alternate fuel recovery facilities; RCRA and TSCA permitted landfills and destructive incineration facilities.

Through its full service laboratory, PSC is constantly seeking new and innovative methods of treating and managing wastes in an effort to stay in the forefront of waste treatment and recycling technology.

At PSC, we pride ourselves not only on our technical services, but also on our professional flexibility that enables us to tailor services to the unique needs of our customers. PSC also remains constantly aware of new or anticipated legislation and administrative rulemakings, both state and federal, which might affect our service to our customers. PSC has a good professional working relationship with the staff of the U.S. EPA Region 10 field office and State of Alaska DEC.

Company Commitment

PSC is committed to providing our customers with the utmost in Customer Service supplying them with timely expert advice and opinions on waste issues as requested, via the telephone and by e-mail. Each PSC employee will dutifully and professionally execute their respective duties to best serve your needs and requirements.

At PSC we strive to service our customers in a cost effective and professional manner. Our staff is available to respond to any inquiry 24 hours per day, 7 days per week. An important element of PSC's management philosophy is a commitment to regulatory compliance. Each employee, from the top down, is dedicated to abiding by all applicable environmental regulations. PSC's Regulatory Affairs Department and in-house legal counsel help to assure this corporate commitment.

Standard Method of Operations

PSC's treatment facilities in Washington State operate under extensive sets of Part B plans and procedures. These plans and procedures are under constant revision and review by the Washington State Department of Ecology with oversight by EPA Region 10.

In addition to ongoing inspections and site audits by agencies and customers, PSC maintains an in-house regulatory affairs staff under the direct supervision of management at the vice presidential level. The regulatory staff is divided into two sections: Health & Safety and Regulatory Compliance. The Regulatory Compliance staff is divided into in-plant compliance personnel, with each facility having an assigned agent, and Agency Liaison and Plant Audit teams. These teams audit our facilities as well as subcontracted disposal facilities. In addition to internal audits, PSC also has an independent audit performed no less than once a year.

Each PSC treatment facility operates under a specific waste acceptance and analysis plan (Subsection C of each plant's Permit B plans). This plan requires that the plant receiving the waste has complete and total knowledge of the waste and has approved the waste stream for management prior to receiving that waste stream at a plant. We complete this requirement through our computerized waste management system, PREVIEW. PSC will assist in profiling any new wastes and will assist in the preparation of land disposal restriction notifications.

PSC is knowledgeable in the minimization of all forms of waste and will actively assist in developing and implementing waste minimization programs if requested. This will include recommendations on product substitution and cost effective recycling alternatives to final disposal.

PREVIEW

In the profile system the customer submits analytical or MSDS (Unused Product) to their personal Customer Service Representative (CSR). The CSR enters the data provided for waste characterization and completes the profiling and approval process. If a material/product is unknown a sample will be required, the corporate laboratory will determine chemical composition of the waste and complete the profile form for acceptance. The turn around for Laboratory services is not less than 20 days.

Labpack profile acceptance does not require a sample but may require MSDS sheets upon request for proper classification. The Customer provides the CSR with a list of products/chemicals. The CSR assists customer in segregation by DOT classification. Once appropriately segregated the CSR will assign a profile and submit to customer a packing list approved for receiving at TSDF with all of the necessary markings and labels required for shipment. Labpack profiles have a turnaround time of not less than 15 days. The use of PhilipNow.com may greatly reduce turnaround time of all profiles.

Online waste management

PhilipNow.com is an online waste management network developed by PSC Pacific Northwest region to serve PSC customers in Alaska, Washington, Oregon, Idaho, Montana and California. This on-line innovation provides customers with personalized, quick, easy and secure access to their waste resources from any computer 24 hours a day, 7 days a week. No other company operating in Alaska offers this type of new groundbreaking service.

- Profiles

Copy, Create, Manage, Print, Re-certify, Search by keyword, and View Profiles

- Lab pack

Upload pre formatted Lab pack attachment sheets directly from excel, attach to existing profiles and submit for approval. View past lab pack attachments as a tool to aid in proper segregation.

- Orders

Create a new order, Schedule Transportation, View and Print existing or past orders, Track order values, create and print LDR notifications, Print Manifests and Labels on-site, PSC provides the materials.

- Invoicing

View and print Invoices, Search Invoices by date, order, invoice or purchase order #, Submit secure on-line payment by Credit Card

- Reports

Current reports available are Washington State and Oregon State Hazardous Waste Annual Reports, Profile Listings, Wastes Shipped by Profile, Order Summaries, Order Details, Manifest Summaries and Manifest Details.

- Additional On-line Capabilities

PhilpNow.com provides a variety of links to other On-line Resources and provides an area to submit feedback and/or suggestions. PhilpNow is still in the early stages of development; there are plans for future expansion including the ability to print Federal Annual reports, Certificates of Treatment, Recycling, and Disposal, just to name a few.

Customer Site Services

PSC's Customer Site Services Group (CSS) was developed to support the need for on-site hazardous waste identification, inventories, categorization, sampling, labpacking, profiling, labeling, manifesting, and on-site waste management. PSC personnel are well trained, organized, supervised and fully versed in the peculiarities of working in Alaska. PSC's technically expert on-site supervisors are routinely required to make rapid and accurate decisions concerning hazardous waste.

All CSS personnel have a thorough working knowledge of federal and state regulations governing hazardous waste handling, transportation and disposal procedures. All CSS personnel have received and are current with the training requirements of RCRA/OSHA/DOT and other training relevant to their work tasks. Annual training includes Hazardous Waste Refresher, First Aid/CPR, Confined Space Entry, and Transportation of Hazardous Materials. This training supplements PSC's regular safety training and safety meetings.

PSC can provide upon request two (2) RCRA trained personnel with a minimum of five (5) years experience in hazardous waste handling who are competent at lab-packing, HAZCAT®, and waste sampling.

PSC maintains detailed and accurate records of all aspects of work performed for our customers; copies of these records are available upon request.

Labpack Services

CSS groups work closely with on-site personnel and the TSDFs to insure that waste materials are properly prepared and packaged on-site to minimize the customer's disposal costs at the facility.

This group provides on-site assistance in all aspects of the management phase. CSS routinely provides technicians to perform on-site labpack operations as well as the following services:

Waste Identification Technicians document all waste containers by chemical or product name and hazardous regulated constituents. They perform on-site hazardous characterization (HazCat®) and analysis through our in-house laboratory.

Waste Classification Technicians will evaluate each chemical in accordance with guidelines set by EPA, DOT and WDOE. Each inventoried container will be given an identification number, reference to Land Disposal Restriction notification requirements, DOT hazard class, DOT identification numbers, and applicable state hazardous waste codes.

Segregation & Packing Technicians will package compatible materials into the same drums with the most appropriate absorbent materials. Drums are labeled in compliance with DOT regulations.

Characterizing Unknowns

PSC utilizes the following logic path for properly characterizing unknown waste streams:

1. Identify the source (department and/or process of generation)
2. Examine physical characteristics (packaging, labeling, color, physical state, viscosity)
3. Conduct field testing using the HazCat® kit method
4. Material in bulk containers <5 gallons will be packaged according to DOT hazard class. If more information is deemed necessary during the profile review, analysis will be performed at the receiving PSC TSDF.
5. Material in bulk containers >5 gallons will be sampled and tentatively identified by PSC's CSS personnel. The sample will be forwarded to our corporate laboratory for confirmation analysis and waste characterization.

Identification of unknowns for the purpose of transport and disposal can usually be accomplished without laboratory analysis, and the cost is included in the disposal pricing. The characterization of unknowns for the purpose of affixing USEPA waste codes requires definitive laboratory analysis. Laboratory charges will vary according to the type of analysis.

Transportation Capability

PSC owns and operates its own hazardous waste transportation truck fleet, Resource Recovery Inc./Burlington Environmental Inc. This fleet includes tractors and a wide variety of trailers, dumps, and vans for the transportation of all hazardous waste types. All equipment, vehicles, and drivers are in full compliance with federal, state, and local laws and regulations.

PSC is a recognized expert in and is intimately familiar with shipping hazardous waste, both in and out of Alaska. PSC is extremely knowledgeable in preparing shipments by truck, rail, vessel, or air.

PSC is responsible for handling the transportation of hazardous and non-hazardous wastes from various facilities. Including packaging, labeling, preparation of U.S. and Canadian manifests and other required shipping documents.

Certificates

Certificates of Treatment, Recycling and/or Disposal are issued when all waste streams recorded on the receiving manifest have been managed in accordance with facility permits. The Certificate of Treatment, Recycling, and Disposal details treatment processes and final disposition of the waste. The certification system provides generators confirmation that their wastes have been properly managed and disposed. The issuance of these certificates complete the RCRA "cradle to grave" philosophy and relieves the customer of future liabilities. The certificates are computer-generated and are designed to match manifests exactly.

Tracking

To assist generators in the completion of the required Federal reports for hazardous waste generation, PSC annually prepares a Waste Summary Report detailing the material received at our Treatment Facilities from each facility. These reports are then sent for review to compare tracking methods, disposal options, and to help improve waste minimization and recycling. This summary report is formatted to make completion of the required State and/or Federal reports a simple task. The waste report summaries include:

- Profile #
- Total Weight
- Recycling Percentages
- Waste Codes
- Source Code
- Form Code

This report is also available on-line at the PhilipNow.com website.

Each PSC TSDF has a specific tracking system outlined in detail in each plant's Part A or Part B plan. The following illustration of tracking one drum received on a single manifest summarizes PSC's tracking methods:

1. Once the drum arrives at the plant, it is sampled and checked by the in-plant lab for contents and verified as to the chemical match with a pre-approved profile.
2. The drum enters the tracking system on a provisional basis. If the contents of the drum match the profile, the manifest is signed off and the receiving plant adds the drum to the active tracking system.
3. The volume or weight of the drum is measured and a unique tracking number is assigned. This number cross-references the manifest number the drum arrived on, and the generator's EPA ID number.
4. From this point forward, every movement of the drum or any portion of its contents is tracked through the plant's treatment processes. PSC tracks waste to the nearest pound and/or the exact location in storage areas or bulk tanks. The assigned tracking number remains constant as the drum/contents travel to other plants in our system, and to final disposition.
5. The final disposal company provides the plant with disposal certificates that are tracked to the original number assigned the drum when received at the plant.

The computer tracking system is the same for an assorted container load, bulk liquid, or solid load as it is for a single drum.

All plant computerized systems have back-up procedures in place, including paper files, computer tapes, and computer diskette back-ups. Records are archived on location in each plant as well as in the corporate vault. Records are stored indefinitely.

In Conclusion, we believe that this summary provides adequate proof that PSC understands the service requirements desired by your company. If you have any questions regarding this document or require clarification on any item, please don't hesitate to call.

Listing of Facilities

Treatment, Storage and Disposal Capability

PSC is the largest hazardous waste management company in the Pacific Northwest and Alaska, emphasizing proper and environmentally safe management of hazardous waste. As a full service company, PSC performs hazardous waste evaluation, lab analysis, pretreatment (volume reduction), recovery, stabilization, transportation, neutralization, disposal and recycling services.

PSC currently operates 2 RCRA permitted facilities, located in the greater Seattle area of western Washington State. An audit summary of the PSC facilities proposed for use by your company is included for your review. All manifests shipped from Alaska will be terminated at one of these facilities. Only in the rare case where such large volumes of hazardous waste or recyclable materials are generated would shipping be made to another permitted facility. In these cases you would be notified whenever a new site or different site is used by PSC. PSC will consult with you in selecting disposal/recycling sites and will handle all permits and applications if required.

In addition, PSC has long-standing contracts with companies that provide EPA-approved hazardous waste fuel blending, destructive incineration, landfill disposal, and specialized reclamation or recycling activities. A summary of these facilities proposed for use by PSC for is included for your review. PSC ensures that all contracted facilities used for hazardous waste final disposal/recycling are fully permitted, EPA approved facilities as determined by PSC's Regulatory Affairs Facility Audit staff.

Laboratory Services

Each of PSC's TSDFs is equipped with a laboratory to provide analytical services. Capabilities for all laboratories include analysis of samples for metals, PCBs, volatile organic compounds, inorganic ions, cyanide, sulfide, phenol, oil and grease, and physical characteristics.

The corporate laboratory is a Washington State Department of Ecology Accredited Laboratory and continues to meet the analytical requirements of a rapidly expanding company. Methodologies used in analysis are EPA approved and all quantitative analyses follow strict quality assurance guidelines developed in accordance with EPA requirements.

Regulatory Experience

The PSC Regulatory Affairs staff provides regulatory support to all divisions, including all TSDFs, plant operations, transportation, sales, laboratory, and technical/engineering services. Regulatory support includes monitoring and evaluating new federal and state regulations, and providing updates on RCRA, TSCA, SARA Title III, CERCLA, air and water quality, OSHA, and DOT regulations. All PSC personnel training is coordinated with the Regulatory Affairs Department in compliance with RCRA and OSHA requirements.

This staff maintains a continual working relationship with the EPA Regional Office staff, Washington Department of Ecology, Oregon Department of Environmental Quality, Alaska Department of Environmental Conservation (ADEC), and Alaska Department of Labor (DOL), and OSHA. We encourage inquiry with either the Washington Department of Ecology or EPA Region 10, and ADEC regarding PSC's compliance with state and federal regulations.

Plant Emergency Spill Response

As part of their permit, each plant has in place an Emergency Spill Response Plan. These permits are on file and may be reviewed by contacting our Regulatory Affairs Department.

Quality Assurance/Quality Control

In all of our laboratory, field and plant operations, we are committed to quality assurance/quality control (QA/QC) procedures to assure superior workmanship and dependable data. Specific QA/QC plans and Standard Operating Procedures (SOP's) are written for each treatment facility, laboratory and field operations. PSC's corporate laboratory operates under a formal QA program written in accordance to EPA specifications. The plans and procedures are compiled from management policies, data quality objectives, QA principles, and industry standards. PSC's dedication to these values is designed to insure our customers with above average production of quality defensible data.



STATEMENT OF QUALIFICATIONS



CONSULTING SERVICES

Hazardous Materials Consulting

WEC provides comprehensive inspection and design services for the identification and abatement of hazardous materials, to include the following services;

- Facility and site surveys
- Hazardous material abatement work plans
- Hazardous material design drawings and specifications
- Abatement cost estimating
- Compliance Monitoring
- AHERA Abatement Project Design
- AHERA Management Plans
- AHERA Building Inspections

Industrial Hygiene

WEC provides workplace monitoring for such potential hazards as:

- Airborne asbestos
- Airborne metals
- Airborne biological hazards
- Dusts
- Fumes
- Gases
- Heat and Cold Stress

Health and Safety Management

In addition to industrial hygiene, WEC's services Health and Safety (H&S) Management, ranging from Company H&S Program Development, on-site consulting, to final submittals:

- Site-Specific Safety Plans
- Hazard Analyses for Work Plans
- Corporate H&S Program development, management, audits, and reporting
- General OSHA compliance consulting
- Confined Space Monitoring
- Ergonomics, Indoor Air Quality, office place hazards
- Noise, Respiratory Protection, HAZCOM Programs



LABORATORY SERVICES

Phase Contrast Microscopy

Phase contrast microscopy (PCM) is used to determine fiber concentrations in air. All asbestos analyses are performed in strict compliance with the NIOSH 7400 Method, counting rules A. The PCM laboratory is a successful participant in the Proficiency Analytical Testing program and all analysts are enrolled in the Asbestos Analyst Registry.

Polarized Light Microscopy

Polarized light microscopy (PLM) is used to determine asbestos fiber concentrations in bulk building materials. PLM is applicable to the analysis of building survey submissions and other bulk materials. The National Voluntary Laboratory Accreditation Program accredits the laboratory.

Particle Identification Services

Particle identification and trace particle analysis projects are performed on an unlimited variety of materials. Particle identification is useful for the comparison of specific particles, determination of sources of particles, percent of respirable particle, product evaluations and forensic investigations. Particles can be sized and characterized by elemental composition and the distribution of sizes documented.

Gravimetry

Gravimetry, which quantitatively removes organic and acid soluble binder components (typically found in building materials) by ashing or acid-washing samples, is an ideal preparation technique when low level asbestos concentrations need to be determined. Once the gravimetric weight loss is established, the sample residue can be analyzed by PLM (point counting recommended) or Transmission Electron Microscopy.

Flame Atomic Absorption

Flame Atomic Absorption Spectroscopy (AA) is used to accurately determine concentrations of specific elements in a variety of substrates, such as lead concentrations in paint, air or soil. AA Analysis for environmental lead are conducted for air quality testing by NIOSH method 7082, and by EPA method SW 846-6010/7420 for bulk materials. The lead laboratory is an active participant in the AIHA ELPAT proficiency testing program.

QUALITY ASSURANCE

A comprehensive quality assurance program is implemented to monitor laboratory analyses, report generation, sample custody, and storage. The program includes:

- Documentation of the QA program in a series of quality assurance manuals.
- Monitoring of the QA program by a designated quality control manager.
- Documented calibration and preventive maintenance for microscopes and instrumentation.
- Periodic contamination checks including personal and area monitoring.

Phase Contrast Microscopy

- Successful completion of NIOSH 582 or equivalent training for all microscopists.
- Participation in the Proficiency Analytical Testing program.
- Participation in the Asbestos Analytical Registry program.
- Participation in inter-laboratory round robin sample exchange programs.
- QC charts maintained for each analyst.
- Analysis of laboratory blanks.
- Daily analysis of reference slides.

Polarized Light Microscopy

- Training by McCrone Research Institute.
- Participation in NVLAP proficiency testing.
- Participation in inter-laboratory round robin sample exchange programs.
- Analysis of NIST reference materials.
- Duplicate and replicate analysis of 10% of the client-submitted samples.

Flame Atomic Absorption

- Participation in the ELPAT Proficiency Program
- Analysis of known standards with each sample set (20 samples or less).
- Daily calibration to reference solutions from two independent sources.
- Full process QA/QC in accordance to AIHA standardized laboratory procedures.

Sample Custody and Storage

- Fully traceable, computerized sample log-in and throughput procedures.
- Review of reports for technical accuracy.
- Strict policies enforcing security and client confidentiality.
- Routine sample storage for 120 days.

Rx Date/Time

MAY-20-2002(MON) 08:55

White Environmental

P. 002

MAY-20-2002(MON) 08:04

White Environmental

(FAX)808 843 0657

P. 002/004

The American Industrial Hygiene Association

is proud to acknowledge that

White Environmental Consultants

Honolulu, HI

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Program (LQAP) and therefore conforms to the ISO/IEC 17025 international standard, and is formally recognized by AIHA as being technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE

Originally Accredited: 02/01/00

☐ Metals ☐ Silica ☒ Asbestos PCM ☐ Asbestos PLM ☐ Organic Solvents ☐ Diffusive Samples

ENVIRONMENTAL LEAD

Originally Accredited: 01/01/02

☒ Paint Chips ☐ Air ☒ Dust Wipes ☒ Soil

ENVIRONMENTAL MICROBIOLOGY

☐ Bacteria ☐ Fungi

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory #102845

Certificate #

IHLAP Accreditation Expires: 02/01/03

ELLAP Accreditation Expires: 01/01/05

Dawn D. Thomas

Dawn D. Thomas, ASQ Certified Quality Mgr.
Chair, Analytical Accreditation Board

Henry B. Vick
Henry B. Vick, CIH, CSP, PhD, ROH
President, AIHA

John Cuzzocreo, III

Position:

Environmental Technician

Years of Professional Experience

3

Academic Qualifications (Education and Training):

EPA Model Asbestos Worker and Contractor/ Supervisor

EPA Lead Awareness Training

NIOSH 582 Sampling and Evaluation of Airborne Dust

Work Experience Summary:

Current

White Environmental Consultants, Inc. – Environmental Field Technician

- ☐ Responsible for the collection and analysis of airborne particulates both in the field and within a laboratory setting.
- ☐ Responsible for the interpretation of sample results to clients and project compliance.

2003

Arrowhead Environmental Services, Inc. – Asbestos Abatement Worker

- ☐ Responsible for the removal of asbestos and lead containing materials in public and commercial settings.
- ☐ Compliance with all applicable state and federal regulation regarding hazardous material removal.
- ☐ Responsible for the collection of personal air samples for determination of worker exposure.

2002

Lowe's Home Improvement Stores – Customer Service Associate

- ☐ Responsible for the sales and upkeep of the home and garden center.
- ☐ Responsible for the upkeep and maintenance of over twenty different varieties of plants and flowers.

Education:

Junior Year – University of Anchorage Alaska – Anchorage, Alaska

- ☐ Post secondary education studies
- ☐ 2.84 Cumulative Grade point Average

Aurora Environmental & Safety, Inc.

CONFIRMS THAT

John Cuzzocreo, III

Has completed the requisite training consistent with TSCA Title II, 40 CFR part 763, subpart E (AHERA), and 8 AAC 61.600; has met the attendance requirements and successfully covered the course materials entitled:
Asbestos Worker / Supervisor Renewal Course

Certified by

Sue Johnson

PRESIDENT

P.O. Box 211855

Anchorage, AK 99521-1855
907-338-1046

COURSE COMPLETION

May 27, 2005

EXPIRATION DATE

May 27, 2006

STATE OF ALASKA DOL TRAINING PROVIDER

NO. 030001

AK-DOL APPROVED INSTRUCTOR

Sue Johnson

REGISTERED CERTIFICATE

NO. 05052711

Certificate of Achievement

This is to certify that

John Cuzzocreo III

Has successfully completed the following 40-hour course:

NIOSH 582 equivalent

Sampling and Evaluation of Airborne Dust

Date of Classroom Instruction: June 28th - July 2, 2004

Instructor: Garret Slaughenhour *Garret Slaughenhour*



WEC

State of Alaska

Frank Murkowski, governor

Department of Environmental Conservation

CONTAMINATED SITES LAB APPROVAL

<http://www.state.ak.us/dec/eh/lab/cs/csapproval.htm>

TELEPHONE: (907) 745-3236

FAX: (907) 745-1825

550 S. ALASKA ST., Suite 6

PALMER, AK 99645

2 December 2005

Heather Hall
QA Manager
SGS Environmental Services, Inc.
200 W. Potter Dr.
Anchorage, AK 99518-1605

Re: **2006** ADEC Contaminated Sites Lab Approval **UST-005**

Dear Ms. Hall,

Thank you for your continued interest in the State of Alaska Contaminated Sites Laboratory Approval. Based on a review of the materials received, and of those on file, SGS Environmental Services, Inc. in Anchorage, AK (SGS-Anchorage) is approved as detailed below to do work under the June 25, 1999 revision of AS 18 AAC 78.

SGS Environmental Services, Inc. in Anchorage, AK is granted **Full Approval** to perform the following analyses for Alaska contaminated sites projects including UST/LUST:

Name	Method	Matrix
Arsenic; Barium; Cadmium; Chromium; Nickel; Lead; Vanadium	6010B	Water & Soil
Arsenic; Barium; Cadmium; Chromium; Nickel; Lead; Vanadium	6020	Water & Soil
Volatile Chlorinated Solvents	8021B	Water
Polychlorinated Biphenyls	8082	Water & Soil
Benzene; Toluene; Ethylbenzene; Xylenes	8260B	Water & Soil
Volatile Chlorinated Solvents	8260B	Water & Soil
Polycyclic Aromatic Hydrocarbons	8270C-SIM	Water & Soil
Gasoline Range Organics	AK101	Water & Soil
Benzene; Toluene; Ethylbenzene; Xylenes	AK101/8021B	Water & Soil
Diesel Range Organics	AK102	Water & Soil
Diesel Range Organics	AK102-SV	Water
Residual Range Organics	AK103	Soil

Be aware that you must retain method detection limit (MDL) data on file for each method and instrument for which you are seeking approval under the AK CS Program. These may be kept in your in-house files. They need not be submitted to ADEC at this

MS Hall
Page 2
2 Dec. 05

time, however, they may be subject to inspection in the event of an on-site investigation or ADEC may ask they be submitted as part of the approval process.

Please remember your expiration date is **12/18/2006**.

Your window for renewal next year is 9/18/2006 to 11/18/2006.

We must receive your application, fees, acceptable performance evaluation results, and the latest revision of your quality assurance manual during this window.

You may download a copy of the application from the following site:
<http://www.state.ak.us/dec/eh/lab/cs/csapproval.htm>

Your laboratory identifying number remains **UST-005**. Please remember to include this number in ALL correspondence concerning your Alaska CS approval and on all data transmittals.

In order to assure timely handling please address all correspondence to the attention of Shera Hickman, **CS Lab Approval Officer**.

If you have any questions, please contact the approval officer at the following email address shera_hickman@dec.state.ak.us or at (907)375-8210.

Respectfully,

Emanuel
Hignutt,
Jr.

Digitally signed by Emanuel
Hignutt, Jr.
DN: CN = Emanuel Hignutt,
Jr., C = US, O = State of
Alaska, OU = Environmental
Health Laboratory
Date: 2005.12.05 14:58:37 -
0900

for Shera Hickman
CS Lab Approval Officer

cc: laboratory file

State of Illinois
Environmental Protection Agency

Certificate No.:

001582

Forwards the Certificate of Approval

SGS Environmental Services Inc.
200 W. Potter Drive
Anchorage, AK 99518-1605

According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Hazardous and Solid Waste, Inorganic

1010

Ignitability

1020A

Ignitability

1311

TCLP (Organic and Inorganic)

6010B

Aluminum

Barium

Cadmium

Cobalt

Lead

Molybdenum

Silver

Vanadium

Antimony

Beryllium

Calcium

Copper

Magnesium

Nickel

Sodium

Zinc

Arsenic

Boron

Chromium

Iron

Manganese

Selenium

Strontium

6020

Aluminum

Barium

Cadmium

Cobalt

Lead

Molybdenum

Selenium

Thallium

Antimony

Beryllium

Calcium

Copper

Magnesium

Nickel

Silver

Vanadium

Arsenic

Boron

Chromium

Iron

Manganese

Potassium

Sodium

Zinc

7470A

Mercury

7471A

Mercury

9040B

Hydrogen Ion (pH)

9045C

Hydrogen Ion (pH)

956

Fluoride

Nitrate

Sulfate

Chloride

Nitrite

Fluoride

Phosphate

**State of Illinois
Environmental Protection Agency**

Certificate No.:

001582

Forwards the Certificate of Approval

SGS Environmental Services Inc.
200 W. Potter Drive
Anchorage, AK 99518-1605

Hazardous and Solid Waste, Inorganic

9060

Total Organic Carbon (TOC)

9065

Phenolics

Hazardous and Solid Waste, Organic

8015B

Diesel range organics (DRO)

Gasoline range organics (GRO)

8021B

Benzene

Ethylbenzene

m-Xylene

o-Xylene

p-Xylene

Toluene

8081A

4,4'-DDD

4,4'-DDE

4,4'-DDT

Aldrin

alpha-BHC

alpha-Chlordane

beta-BHC

delta-BHC

Dieldrin

Endosulfan I

Endosulfan II

Endosulfan sulfate

Endrin

Endrin aldehyde

Endrin ketone

gamma-BHC (Lindane)

gamma-Chlordane

Heptachlor

Heptachlor epoxide

Methoxychlor

Toxaphene

082

PCB-1016

PCB-1221

PCB-1232

PCB-1242

PCB-1248

PCB-1254

PCB-1260

8260B

1,1,1,2-Tetrachloroethane

1,1,1-Trichloroethane

1,1,2,2-Tetrachloroethane

1,1,2-Trichloroethane

1,1-Dichloroethane

1,1-Dichloroethene

1,1-Dichloropropene

1,2,3-Trichlorobenzene

1,2,3-Trichloropropane

1,2,4-Trichlorobenzene

1,2,4-Trimethylbenzene

1,2-Dibromo-3-chloropropane (DBCP)

1,2-Dibromoethane (EDB)

1,2-Dichlorobenzene

1,2-Dichloroethane

1,2-Dichloropropane

1,3,5-Trimethylbenzene

1,3-Dichlorobenzene

1,3-Dichloropropane

1,4-Dichlorobenzene

2,2-Dichloropropane

2-Butanone (Methyl ethyl ketone, MEK)

2-Chloroethyl vinyl ether

2-Chlorotoluene

2-Hexanone

4-Chlorotoluene

4-Methyl-2-pentanone (Methyl isobutyl ketone)

Acetone

Benzene

Bromobenzene

Bromochloromethane

Bromodichloromethane

Bromoform

Bromomethane

Carbon disulfide

Carbon tetrachloride

Chlorobenzene

Chlorodibromomethane (Dibromochloromethane)

Chloroethane

Chloroform

Chloromethane

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

Dibromomethane

Dichlorodifluoromethane

Dichloromethane (Methylene chloride)

Ethylbenzene

Hexachlorobutadiene

Isopropylbenzene

Methyl ethyl ketone

Methyl isobutyl ketone

Methyl-t-butyl ether

m-Xylene

n-Butylbenzene

n-Propylbenzene

o-Xylene

p-Xylene

sec-Butylbenzene

Styrene

tert-Butylbenzene

tetrachloroethene

Toluene

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichloroethene

Trichlorofluoromethane

State of Illinois
Environmental Protection Agency
Forwards the Certificate of Approval

Certificate No.:

001582

SGS Environmental Services Inc.
200 W. Potter Drive
Anchorage, AK 99518-1605

Hazardous and Solid Waste, Organic

8260B

Vinyl chloride

Vinylidene chloride

Xylenes (Total)

8270C

1,2,4-Trichlorobenzene
1,4-Dichlorobenzene
2,4,6-Trichlorophenol
2,4-Dinitrophenol
2,6-Dinitrotoluene (2,6-DNT)
2-Methylnaphthalene
3,3'-Dichlorobenzidine
4-Bromophenyl phenyl ether
4-Chlorophenyl phenyl ether
Acenaphthene
Anthracene
Benzo(b)fluoranthene
Benzoic acid
Bis(2-chloroethyl) ether
Butyl benzyl phthalate
Dibenzofuran
Di-n-butyl phthalate
Fluorene
Hexachlorocyclopentadiene
Isophorone
Nitrobenzene
N-Nitrosodiphenylamine
Pentachlorophenol
Pyrene

1,2-Dichlorobenzene
1-Chloronaphthalene
2,4-Dichlorophenol
2,4-Dinitrotoluene (2,4-DNT)
2-Chloronaphthalene
2-Nitroaniline
3-Nitroaniline
4-Chloro-3-methylphenol
4-Nitroaniline
Acenaphthylene
Benzo(a)anthracene
Benzo(g,h,i)perylene
Benzyl alcohol
Bis(2-chloroisopropyl) ether
Chrysene
Diethyl phthalate
Di-n-octyl phthalate
Hexachlorobenzene
Hexachloroethane
m-Cresol (3-Methylphenol)
N-Nitrosodimethylamine
o-Cresol (2-Methylphenol)
Phenanthrene
Pyridine

1,3-Dichlorobenzene
2,4,5-Trichlorophenol
2,4-Dimethylphenol
2,6-Dichlorophenol
2-Chlorophenol
2-Nitrophenol
4,6-Dinitro-2-methylphenol
4-Chloroaniline
4-Nitrophenol
Aniline
Benzo(a)pyrene
Benzo(k)fluoranthene
Bis(2-chloroethoxy) methane
Bis(2-ethylhexyl) phthalate
Dibenz(a,h)anthracene
Dimethyl phthalate
Fluoranthene
Hexachlorobutadiene
Indeno(1,2,3-cd) pyrene
Naphthalene
N-Nitrosodi-n-propylamine
p-Cresol (4-Methylphenol)
Phenol

AIR MONITORING PLAN

Air samples shall be collected and analyzed in accordance with methods specified by the National Institute for Occupational Safety and Health (NIOSH) Method 5503 and for airborne PCB concentrations and NIOSH Method 7105 for airborne concentrations of lead as required by DOLWD and OSHA.

It is expected that a small crew will be working on this project. The Contractor will conduct full shift personal exposure monitoring on 25% of the workers or at least two workers each day. Where multiple crews are working simultaneously at different locations, or on different tasks, at least one representative person on each crew will be monitored. Sampling will be conducted using personal sample pumps and 37 mm mixed cellulose ester filter cassettes, closed face. One sample will be taken for each sampled worker spanning the entire work shift. Work shifts are expected to be eight hours long. Lunch periods in non-contaminated areas will not be sampled, but break periods will be sampled. Pumps will be pre- and post-calibrated to approximately 2.0 liters per minute using a primary standard in accordance with good industrial hygiene practice. Sample cassettes will be fastened in the worker's breathing zone. Each sample will be run for approximately eight hours. Sample volumes will be approximately 1060 liters. Because LBP will be removed using wet methods, lead dust is not expected to be generated. Lead air sample cassettes are not likely to become overloaded during the full shift sample. However, multiple consecutive samples may be taken if there is any problem with filter loading.

Air monitoring for PCB's will be done using lead air filter cassettes. The Contractor will conduct full shift personal exposure monitoring on 25% of the workers or at least two workers each day. Where multiple crews are working simultaneously at different locations, or on different tasks, at least one representative person on each crew will be monitored. Sampling will be conducted using personal sample pumps and 37 mm mixed cellulose ester filter cassettes, closed face. One sample will be taken for each sampled worker spanning the entire work shift. Work shifts are expected to be eight hours long. Lunch periods in non-contaminated areas will not be sampled, but break periods will be sampled. Pumps will be pre- and post-calibrated to approximately 2.0 liters per minute using a primary standard in accordance with good industrial hygiene practice. Sample cassettes will be fastened in the worker's breathing zone. Each sample will be run for approximately eight hours. Sample volumes will be approximately 1060 liters.

Laboratory analysis will be completed by a facility accredited by the American Industrial Hygiene Association. Upon receipt of analytical results the laboratory

will calculate eight hour TWA's for sampled workers. If work shifts exceed eight hours, the total exposure will be compressed into eight hours for comparison with the PEL. The Contractor will provide all results to site workers within five days of receipt and will also submit copies to the Contracting Officer.

Airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926, Section 62. One sample shall be taken within the work area and one sample shall be taken outside of the mechanical room near an entrance to the room. In a similar fashion environmental air monitoring for PCB's will be conducted.

The Contractor will follow the Air Monitoring Plan throughout the course of the project. Any deviations from the plan will be submitted to the Contracting Officer for approval in advance.

RESPIRATORY PROTECTION PROGRAM

INTRODUCTION

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished, as far as feasible, by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

In the hazardous materials abatement it is imperative that protective measures be taken. These measures include worker protection (the most important of which is the respirator) and environmental quality. Even though the best of environmental quality procedures are used, in hazardous materials abatement the danger of exposure is great. For this reason the use of respirators during all hazardous materials abatement work is required by Asbestos Removal Specialists of Alaska (ARSA).

Respirators shall be provided by ARSA when hazardous materials abatement work is being done. ARSA shall provide the respirators which are applicable and suitable for the purpose intended. ARSA shall be responsible for the establishment and maintenance of a respiratory protective program which shall include those items listed in the program described herein. This program is in accordance with 29 CFR 1910.134.

Employees of ARSA shall use the provided respiratory protection in accordance with instructions and training received.

ADMINISTRATION

The administrator of this program shall be John Abrams. Mr. Abrams is experienced in the selection, fitting, testing, cleaning, maintenance and instruction in the proper use of respirators and their limitations.

Mr. Abrams has been charged with the following responsibilities:

1. Supervision of respirator selection procedure.
2. Establishment and conduct of periodic training sessions for respirator users.
3. Establishment of conduct of a continuing program of cleaning, inspection, and maintenance of respiratory equipment.
4. Designation of proper storage areas for respiratory equipment.
5. Assurance that the necessary medical approval has been received for each user of respiratory equipment.
6. Continuing inspection and evaluation of all aspects of the respiratory protection program to assure their continued functioning and effectiveness.

RESPIRATOR PROGRAM

Under a good respiratory program both the employer and the employee have certain responsibilities which must be adhered to. These responsibilities, if diligently carried out, will serve as a check and balances system for the program and give maximum protection and benefit for each party. With the diligent work and monitoring by the administrator the respiratory program will be a success and serve employees and employer within the general intent of Federal guidelines and regulations.

Employer Responsibility

1. Respirators shall be provided by the employer, at no charge to the employee, when they are necessary to protect the health of the employee.
2. The employer shall provide the respirator which is applicable and suitable for the intended purpose.
3. The employer shall be responsible for the establishment and maintenance of a respiratory protection program.

4. The employer shall be responsible for the execution of the respiratory program.
5. The employer shall be responsible for ensuring minimum health risks to the employees during hazardous materials abatement work by requiring proper respiratory protection.
6. The employer shall be sure that each employee has read and understands the respiratory program.

Employee Responsibility

1. The employee shall use the respiratory protection in accordance with instructions and training received.
2. The employee shall be responsible for cleaning, inspecting, and making minor repairs on his/her respirator, if necessary, in accordance with instruction and training received.
3. The employee shall report any trouble or malfunction of the respirator to his supervisor.
4. The employee shall cooperate with those doing daily air monitoring and check results of that air monitoring. If the employee has any questions about protection in regards to air quality he/she shall contact his/her supervisor and obtain an understanding of the respiratory protection needed.
5. The employee shall understand the level of respiratory protection required for each project and be entitled to and given the highest degree of respiratory protection compatible with, and feasible for, the job site if so desired.
6. The employee shall use all respiratory equipment and follow all respiratory programs and rules and regulations of the Employer and Federal, State and Local regulatory agencies.

Each employee who uses a filter respirator shall be permitted to change the filter elements whenever an increase in breathing resistance is detected, and an adequate supply of filters elements shall be maintained for this purpose.

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator face pieces whenever necessary to prevent skin irritation associated with respirator use.

No employee shall be assigned to tasks requiring the use of respirators if, based upon his/her most recent medical examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator.

Eating, smoking, drinking, chewing tobacco or chewing gum shall not be permitted while wearing respiratory protective equipment.

SELECTION OF RESPIRATOR

The respirator is the most important piece of personal protective equipment and is the critical line of defense for hazardous materials abatement workers against the health effects of air contaminants.

OSHA regulation 29 CFR 1910.134 (Respiratory Protection Standard) is not specific to hazardous materials, but pertains to respiratory protection from all airborne toxins and particles. This regulation specifies requirements for a respiratory protection program, air quality, use and maintenance of respirators.

OSHA regulation 29 CFR 1910.134 outlines when respirators must be used, who must provide the, and what types are safe and effective to use in a given situation. ARSA is responsible for providing respirators when ever the Permissible Exposure Limit (PEL) to airborne hazardous materials is at or exceeds these levels. The respirator provided must be approved by both the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH).

Respirators are used at ARSA to protect employees exposed to hazardous materials air borne contaminants.

The types of respirators used by ARSA employees on these projects are:

1. Half mask air-purifying respirators, also called Negative Pressure Respirators, other than a disposable respirator, equipped with high efficiency filters.
2. Full facepiece air-purifying respirators equipped with high efficiency filters.

3. Full facepiece supplied-air respirators operated in pressure demand mode.

Filter types used are high-efficiency particulate air filters for airborne particulate exposures, and organic vapor absorbent cartridges for organic substances exposures. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter.

Where respirators are used, ARSA shall select and provide, at no cost to the employee and shall ensure the employee uses the respirator provided.

ARSA shall select respirators from among those jointly approved as being acceptable for protection by NIOSH under the provisions of 30 CFR Part 11.

ARSA shall provide a powered air-purifying respirator instead of any negative-pressure respirator for hazardous materials exposure whenever:

1. An employee chooses to use this type of respirator, and
2. This respirator will provide adequate protection to the employee.

At no time shall a respirator be selected which offers less protection than required for the particular conditions under which it is to be used. However, if desired, a respirator type offering a greater protection factor than needed may be selected. Respirators assigned for higher environmental concentrations may be used at lower concentrations.

TRAINING

Training must be provided before or at the time of initial assignment (unless the employee has received equivalent training within the previous 12 months) and at least annually thereafter.

All ARSA employees working on hazardous materials abatement projects shall have received training in hazardous materials abatement and awareness training for the substances being abated. Such training includes the nature of hazards on the abatement projects including organic vapors and use and care of respirators.

The training program will be conducted in a manner that the employee is able to understand. ARSA shall ensure that each employee is informed of the following:

1. Methods of recognizing hazardous materials.
2. The health effects associated with hazardous materials and organic vapors to which the employee might be exposed.
3. The relationship between smoking and hazardous materials in producing lung cancer.
4. The nature of operations that could result in exposure to hazardous materials and the importance of necessary protective controls to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, and any necessary instruction in the use of these controls and procedures.
5. The purpose, proper use, fitting instructions, and limitations of respirators.
6. The appropriate work practices for performing the hazardous materials jobs.
7. Medical surveillance program requirements.

ARSA will make readily available to all affected employees, without cost, all written materials and State of Alaska Codes relating to the employee training program.

FIT TESTING

All tight-fitting respirators will be fit tested under this program.

Any employee required to wear a respirator shall be assured of having a proper fit. Respirators will be selected which are comfortable to the wearer. This shall be achieved with (1) an initial and annual qualitative fit test and (2) both a positive or negative pressure fit test each time the respirator is put on. The

manufacturer's facepiece fitting instructions should be followed. The method used is the Irritant Fume Protocol (smoke test) as described in the attached SOP for fit testing.

Any individual with facial hair (sideburns, beard, mustache) which protrudes into the sealing surface of the masks will be refused fitting. Fitting and issue will be allowed on clean shaven faces only.

The medical status of all users will be determined prior to fitting.

The employee must be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers.

The selection process must be conducted in a room separate from the fit test chamber to prevent odor fatigue. Prior to the selection process, the employee must be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a "comfortable" respirator. A mirror must be available to assist the employee in evaluating the fit and positioning of the respirator. This instruction may not constitute the employee's formal training on respirator use, as it is only a review.

The employee should understand that he/she is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape and, if fit and used properly will provide adequate protection.

The employee holds each facepiece up to the face and eliminates those which obviously do not give a comfortable fit. Normally, selection will begin with a half-mask and if a good fit cannot be found the employee will be asked to test the full facepiece respirators.

The more comfortable facepiece's are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. All donning and adjustments of the facepiece must be performed by the employee without assistance from the test conductor or other persons. Assistance in assessing comfort can be given by discussing the points listed below. If the employee is not familiar with using a particular respirator, the employee must be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

Assessment of comfort must include reviewing the following points with the employee and allowing the worker adequate time to determine the comfort of the respirator:

1. Positioning of mask on nose.
2. Room for eye protection.
3. Room to talk.
4. Positioning mask on face and cheeks.

The following criteria must be used to help determine the adequacy of the respirator fit:

1. Chin properly placed.
2. Strap tension
3. Fit across nose bridge.
4. Distance from nose to chin.
5. Tendency to slip.
6. Self-observation in mirror.

The employee must conduct the conventional negative and positive-pressure fit checks. Before conducting the negative-pressure or positive-pressure test the employee must be told to "seat" the mask by rapidly moving the head from side-to-side and up and down, while taking a few deep breaths.

The employee is now ready for fit testing.

After passing the fit test, the employee must be questioned again regarding the comfort of the respirator. If

it has become uncomfortable, another model of respirator must be tried.

The employee shall be given the opportunity to select a different facepiece and be retested if the chosen facepiece becomes increasingly uncomfortable at any time.

MAINTENANCE

Where practical each employee will be issued his/her own respirator and is responsible for cleaning and maintenance, according to the SOP attached. All respirators shall be inspected routinely before and after each use and during cleaning.

Each respirator user shall be thoroughly trained in the proper inspection procedures to insure that the equipment is in good condition. Inspection shall include the following:

1. Check of head straps for breaks or tears, loss of elasticity, and missing or malfunctioning buckles.
2. Check of facepiece for dirt, cracks, tears, holes, distortion, or any other signs of deterioration.
3. Check of valves for dust, dirt, or detergent residue on the valves or valve seat, cracks, tears, or distortion in the valve material, or missing or defective valve covers.
4. Check of filter elements for correct filter(s), missing or worn gaskets, worn threads, cracks or dents in filter housing, service life indicator or end of service date.
5. Any other checks the user may deem important.

Cleaning and disinfecting shall be done daily by each worker. Workers will use respirator wipe pads to clean their respirators. After cleaning the respirator shall be stored in a clean container until further use. Respirators which are returned to the shop for future use by others shall be cleaned using a mild detergent soap and water solution. After cleaning respirators shall be placed in containers for storage. All respirators shall be inspected daily for proper function of all valves, filters and head straps. Respirators shall be inspected for wear and cracks daily.

STORAGE

Respiratory equipment shall be stored so as to protect it from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals.

Respirators shall be stored in respirator storage boxes where they are protected against damage or distortion by overcrowding.

Routinely used respirators will be stored in a clean plastic bag.

Respirators shall be stored with facepiece and exhalation valve in near normal positions to prevent the rubber or plastic parts from taking a permanent distorted set.

MEDICAL CLEARANCE AND APPROVAL

ARSA shall institute a medical surveillance program for all employees who are required by this section to wear tight-fitting respirators.

ARSA shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided at no cost to the employee and at a reasonable time and place.

ARSA shall make available medical examinations and consultations to each employee covered under Federal, State and Local regulations on the following schedules:

1. Before assignment of the employee to an area where negative pressure respirators are worn.
2. At least annually thereafter.
3. If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees at the frequencies specified by the physician.
4. Exception: No medical examination is required of any employee if adequate records show that the

employee has been examined in accordance with this paragraph with the past 1-year period.

The content of the medical examination shall be in compliance with all Federal regulations.

ARSA will obtain a written opinion from the examining physician. This written opinion must contain the results of the medical examination and must include:

1. The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to hazardous materials.
2. Any recommended limitations on the employee or on the use of personal protective equipment such as respirators.
3. A statement that the employee has been informed by the physician of the results of the medical examination, and of any medical conditions that may result from hazardous materials exposure.

ARSA shall make available a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

SURVEILLANCE/INDUSTRIAL HYGIENE EVALUATION

Exposure monitoring shall be performed to determine accurately the airborne concentrations of hazardous materials or other contaminants to which employees may be exposed. Determinations of employee exposure must be made from breathing zone air samples that are representative of the 8-hour TWA of each employee.

ARSA will conduct initial and periodic personal breathing zone sampling as necessary to calculate representative 8 hour TWA exposures for all employees on each job. If initial or periodic monitoring indicates that exposures are less than the OSHA action level for the contaminant, monitoring may be discontinued.

All samples will be evaluated using the OSHA Reference Method by an independent testing laboratory. This laboratory shall have instituted quality assurance programs as outlined in Federal regulations.

INSPECTION/AUDITING IN WORKPLACE

The supervisor (competent person) on each job is responsible for checking the use of respirators on the job.

The supervisor will inspect respirators to be sure they are clean, in good operating condition and that the correct HEPA filters are in use.

The supervisor shall be responsible for checking that each employee is wearing respirator capable of providing adequate protection to the employee.

instruction may not constitute the subject's formal training on respirator use, because it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.

5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

- (a) Position of the mask on the nose
 - (b) Room for eye protection
 - (c) Room to talk
 - (d) Position of mask on face and cheeks
7. The following criteria shall be used to help determine the adequacy of the respirator fit:
- (a) Chin properly placed;
 - (b) Adequate strap tension, not overly tightened;
 - (c) Fit across nose bridge;
 - (d) Respirator of proper size to span distance from nose to chin;
 - (e) Tendency of respirator to slip;
 - (f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble, beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

APPENDIX A TO §1910.134—FIT TESTING PROCEDURES (MANDATORY)

Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures—General Requirements

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the test process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

14. Test Exercises. (a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to leg-

end, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something better, his friends say he is looking for a pot of gold at the end of the rainbow.

(6) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT.)

(7) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

5. Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

(a) General Requirements and Precautions

(1) The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

(2) Only stannic chloride smoke tubes shall be used for this protocol.

(3) No form of test enclosure or hood for the test subject shall be used.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

(5) The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

(b) Sensitivity Screening Check

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

(1) The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.

(2) The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.

(3) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

(c) Irritant Smoke Fit Test Procedure

(1) The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).

(2) The test subject shall be instructed to keep his/her eyes closed.

(3) The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the facepiece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.

(4) If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

(5) The exercises identified in section I.A. 14. of this appendix shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.

(6) If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.

(7) Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with

the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

(8) If a response is produced during this second sensitivity check, then the fit test is passed.

APPENDIX 2 TO §1910.134: RESPIRATOR
CLEANING PROCEDURES (MANDATORY)

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B-2. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

I. Procedures for Cleaning Respirators

- A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- B. Wash components in warm (43 °C [110 °F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- C. Rinse components thoroughly in clean, warm (43 °C [110 °F] maximum), preferably running water. Drain.
- D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 °C (110 °F); or,
 2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 °C (110 °F); or,
 3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- E. Rinse components thoroughly in clean, warm (43 °C [110 °F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- F. Components should be hand-dried with a clean lint-free cloth or air-dried.

- G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary. *
- H. Test the respirator to ensure that all components work properly.

PERSONAL PROTECTIVE EQUIPMENT

PPE will conform to MSDS sheets or other recommendations for specific chemicals or hazardous materials.

Workers will be provided with personal protective clothing and equipment. All personal protective equipment will be worn properly at all times, including set-up and until final clearance is established. It will be the duty of the designated competent person supervisor to select and approve all the required personal protective clothing and equipment.

Respirators will be selected and used in accordance with manufacturers recommendations and shall be approved by the National Institute for Occupational Safety and Health for use in environments where hazardous materials are present. For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne asbestos environments shall be Type-H, High-efficiency particulate air (HEPA).

It is expected that the combination of engineering controls and work practices will be sufficient to maintain worker full shift average exposures well below the Permissible Exposure Limit and hence has selected personal protective equipment to be used by abatement workers on this job as follows:

- a. Disposable, Tyvek type, suits with hoods and booties, taped sealed at wrists and ankles.
- b. Rubber boots
- c. Half facemask air purifying negative pressure respirators with high efficiency particulate filters. (Powered air purifying respirators with high efficiency particulate filters will be available for any worker who prefers to use such in place of half face mask respirator.)
- d. Eye protection, head protection, hearing protection and hand protection shall be worn while at the work-site. This includes inside and outside of the hazardous material work area..
- e. Rubber gloves

PERSONAL HYGIENE PRACTICES

All workers shall enter and exit the work area through the decontamination station area. When exiting the work area the workers shall remove their protective clothing and place in a suitable disposal container. Workers shall then proceed through the decontamination area and thoroughly wash their hands and face with soap and water.

Worker shall not eat, drink, chew gum or tobacco, smoke or apply cosmetics while in the work area.

Workers shall not remove any part of their protective clothing in the work area.

Workers, at any time, shall be permitted to exit the work area for personal reasons or to clean their face and respirator. Workers so doing this must exit through the decontamination station area and follow decontamination procedures.

ADMINISTRATIVE CONTROLS

Administrative controls are used as a means to meet the Permissible Exposure Limits (PEL). The hazardous materials in this project are bound within the matrix of other materials. It is not anticipated that there will be amounts of containments released to trigger the need for Administrative Controls.

Typically employee rotation is the means of achieving preventing an employee from reaching the PEL for any given project. If exposure monitoring shows that the PEL may be reached workers would be rotated into the work area, as necessary, to prevent exposure above the PEL.

If the Permissible Exposure Limit would be reached workers would be removed from the project until such time risks caused by exposure are reduced and that worker is below the PEL.

EMERGENCY PLAN

FIRE

During the pre-abatement phase of the job, workers must be made aware of the emergency and exiting procedures. **In the case of a fire, decontamination is forgotten in the face of the immediate danger to life.** Fire exits (outside the containment barriers) should be identified, marked, and contingency plans made for emergency exits and lighting.

Prevention is always the best cure. Listed below are some tips that will decrease the chances of a fire.

- Make sure that sources of ignition - pilot lights, equipment that makes sparks etc. are removed or secured.
- Fuel sources, such as gas or propane lines, should be shut down and secured.
- Locate hot spots and potential fire hazards within the containment area, correct and make arrangements for periodic inspection.
- Do not allow matches or lighters inside the containment area. Prohibitions against smoking inside the containment area will be strictly enforced.
- When using cutting torches, open flames or equipment that will emit sparks, a worker designated as the fire watch should be standing by with fire extinguisher equipment. (Do not use Carbon Dioxide extinguisher in a confined or enclosed space.)
- When cutting into a wall make sure that you know what is in the wall and what is behind it.
- Maintain fire extinguisher throughout the work area.
- Clearly mark emergency exits. Post directional signs if necessary and provide emergency lighting.
- Maintain a command post outside the containment area with a telephone (post emergency numbers) to call for fire or emergency equipment. The command post should also have a fire alarm (a compressed air horn works well) that can be plainly heard inside the containment area.

Unless it is immediately apparent that the fire can be stopped with available extinguisher, the workers shall evacuate the area immediately (without decontamination). At no time should a worker stay behind if ordered out of the containment area. IF IN DOUBT - GET OUT.

After the containment area is evacuated, all workers shall meet at the company trailer or vehicle outside of the building. Team leaders must account for each person in their team and report to the job supervisor. If a worker is unaccounted for rescue should not be attempted by the workers individually. Supervisory personnel must make snap decisions. If the arrival of qualified fire-fighting personnel is imminent, prudence would dictate that they will have the proper equipment and experience to safely attempt the rescue. Disposable clothing is flammable or can melt. The plastic containment barriers will emit a toxic gas when burned. The fire will pick up speed and spread faster the longer it burns and abatement workers do not have the experience or equipment necessary for rescue without possibly becoming another victim.

The containment barrier covering a fire exit must be plainly labeled and a razor knife attached to the plastic. Exit lighting, in case of power failure during, should be operational and checked daily. In case of a fire in the containment area workers would be able to cut through the plastic and escape through the emergency exit. After the fire is out, the workers can worry about the asbestos again. The workers should also be aware that smoke kill more people than fire. While the respirators might filter some of the smoke, it is not a oxygen mask. If there is a fire, the best air will be next to the floor.

ACCIDENTS AND EVACUATION

In case of an accident the first priority is the treatment of the injured party. Others in the containment area should render assistance within their training and abilities. Emergency services at local clinics and other medical personnel are available for first response care. These first response personnel have the ability and authority to order further evacuation, if needed, to intensive care units.

All workers who are injured in the containment area should be evacuated by other workers, if possible. In some cases the injury may be such that a higher level of care may be needed to properly treat the injured person. In this case the responding parties should follow the following procedures.

1. Don protective clothing provided by the contractor and your own portable self-contained breathing apparatus. If it is felt necessary you may don your turnout gear in place of our protective clothing. In many cases our protective clothing may work over your turnout gear.
2. Enter the containment area through the personnel decontamination station. You will be guided through this area by workers on the site.
3. Treat the injured party as necessary to reverse life threatening conditions or ready the injured party for transportation.
4. If the injured party must be evacuated by stretcher, or other means where the injured party cannot be moved by his own power, attempt to remove through the personnel decontamination station. The injured person need not be decontaminated and the emergency personnel need not decontaminate. If the emergency requires evacuation through other areas this is to be done. **The care of the injured is the first consideration.**
5. Once the injured person is outside of the containment area his contaminated clothing should, if possible, be removed down to bare skin. Also emergency personnel should remove their protective clothing or turnout gear at this time and leave with the abatement workers at the scene. This includes self-contained breathing apparatus.
6. The injured party can now be transported to the clinic with a minimum of exposure danger to all other parties.

Any cloths or towels used for the treatment of this patient should be bagged in plastic bags, sealed and taped and disposed of as hazardous waste according to the facilities plan. These cloths or towels shall not be burned or incinerated. After the patient has been wiped clean treatment can proceed under normal conditions for the facility.

HEAT RELATED INJURY

Heat Stress & Dehydration

Heat stress and dehydration are two major dangers for all abatement workers. The asbestos abatement work requires that workers wear full-body disposable clothing and respirators. These are not comfortable under the best of conditions, but when combined with a hot boiler room and hard labor can become extremely hot.

It is important that each worker become acclimated to the environment of the containment area gradually. Pushing too hard is the surest way to develop heat exhaustion or heat stroke. The workers should police themselves and ensure that they drink adequate quantities of water to replace body fluids lost on the job.

Heat Exhaustion

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluids intake, full body clothing, workers not acclimated to heat.

Symptoms: Fatigue, weakness, profuse sweating, pale clammy skin, headache, cramps, vomiting, dizziness, fainting.

Treatment: Remove the worker from the hot area, lay them down and raise the feet, apply cool wet cloths, loosen or remove clothing, allow small sips of water if victim is conscious and not vomiting.

Prevention: Frequent breaks, increased fluid intake, acclimatization to work area environment.

Heat Stroke

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluid intake, full body clothing, workers not acclimated to heat.

Symptoms: Dizziness, nausea, severe headache, hot dry skin, confusion; collapse, delirium, coma, death.

Treatment: Medical emergency, remove worker from hot area, remove clothing, lay them down and cool the body.

Dehydration is another problem associated with asbestos abatement work. It is caused by the insufficient fluid intake, coupled with the hot, sweaty work. Workers can guard against dehydration by drinking plenty of water every time they come out of the containment area. Each worker should also keep track of the number of times that they urinate during the day. They should urinate at least twice in a day, less than that means that they are not taking in enough liquid. Alcohol does not count and can actually contribute to dehydration.

TOXIC ATMOSPHERE

Toxic atmospheres are to be treated like fire. **Get out immediately.** The standard HEPA filter will not prevent the worker from breathing in toxic fumes.

If toxic fumes should penetrate the containment area leave the area immediately. Do not stop to decontaminate. Get to fresh clean air and then to the Contractor's designated area to account for all workers.

If any worker should be overcome by the fumes get them to fresh air and call for emergency medical help.

Do not re-enter the containment area until it has been cleared of all toxic fumes and certified for entry by the Contracting Officer.

POWER FAILURE

In the event of power failure all work will cease until power is restored. Power may be restored by an auxiliary power unit, if available. *If the auxiliary unit will not provide sufficient power to run the required number of negative air machines and other required equipment work will not restart until full power is restored and all negative air units are brought back on line.* It must also be remembered that many other required pieces of equipment are run of electricity and these must also be in operation.

All equipment will be tested and the containment area integrity tested before work is restarted. Air testing will be done outside the containment area to ensure that fibers were not leaked outside containment during the power outage.

DECONTAMINATION OR WORK AREA ISOLATION

Where required by the type of abatement procedures decontamination stations will be provided. In all cases access between any two rooms within the decontamination unit shall be through a plastic sheeting curtained doorways. Separate personnel and equipment decontamination facilities shall be provided. Emergency exits shall be provided from the work area. The personnel decontamination area is the only official entrance and exit, except for emergencies, from the work area.

For hazardous materials control areas openings will be sealed where the release of airborne contaminants is expected. The hazardous materials control area will be established with the use of curtains, portable partitions, or other systems in order to prevent the escape of contaminants from the contaminated hazardous materials control area. All penetrations of the floor, walls, and ceiling shall be sealed with 6-mil polyethylene plastic and duct tape.

CONTAINMENT AREA BREACHES

Major Breaches of Containment Barrier: In the event of a major breach of the containment area all work will cease and repairs will be made to the breach, by the Contractor. Air sampling, by the Contractor, will immediately begin in the areas adjacent to the breach. All non-hazardous materials workers will be evacuated from the area until such time it is determined by the Contracting Officer that the Contractor has cleaned the area, repairs have been made, and there are no contaminants in the air outside of the containment area. Written notification by the Contracting Officer will be required for resumption of work,

both inside and outside of the containment area where the breach occurred. Other trades will be made aware of the containment activities and cautioned of the consequences of a breach of the area.

DETECTION OF UNSUSPECTED AIRBORNE HAZARDOUS MATERIALS CONTAMINATION

If unsuspected containments are detected outside of the work area, in excess of ambient, all work will stop immediately and the source of the contaminant will be determined. All workers outside of the work area will be evacuated from the area and the area secured until such time the source is found and corrected and the contaminant concentrations are determined to be ambient or less and written permission, by the Contracting Officer, is given to re-enter the area.

HANDLING OF PCB OR LEAD PAINT DEBRIS SPILLS

During the loading, unloading, or transportation of contaminant-containing waste, a "spill" can occur. This contingency is the reason that all workers handling the waste are required to wear respiratory protection and disposable clothing, and the reason that all waste is to be kept wet until the disposal container is sealed.

ISOLATION & EVACUATION OF THE AREA

If an contaminant container ruptures the first action is to isolate the area. This should be done by placing barrier tape around the area, covering the spill, and if the spill is liquid prevent the spill from spreading across the floor surface. The materials which would be in the spill, lead paint, paint remover or PCB debris, are not a immediate hazard to life and health for this project.

All nonessential personnel should be evacuated from the area immediately. Project management should be notified of the spill so that monitoring can be performed. Workers should gather necessary equipment to clean up the spill and, if necessary, respiratory protection upgraded to meet contamination levels. (If the contaminated waste was kept wet until sealed in the container, dust levels will be very low.) If possible, a HEPA-filter equipped negative air machine may be put into operation near the spill area to help capture any possible dust which may enter the air.

DECONTAMINATION OF PERSONNEL EXPOSED

Any person not protected by disposable clothing and respirators should proceed to the personnel decontamination station, remove all clothing and shower completely. The contaminated clothing can be taken to an approved laundry inside a plastic bag with asbestos warning labeling affixed. The person exposed can be given clean disposable clothing to wear until his/her clothing is properly cleaned.

The person exposed must be made aware of the exposure, the amount of the exposure, and should be offered a physical examination to document his/her current health status.

In the case of personnel equipped with the proper personal protective equipment, immediate decontamination is unnecessary. The contamination spill should be cleaned up immediately using all necessary tools. If respirator protection can be immediately determined then appropriate respirators should be used.

SELECTION OF PERSONAL PROTECTIVE EQUIPMENT

In no case should the delay of the spill cleanup be delayed while selecting respirators. Workers cleaning up a contaminant spill will be required to wear respiratory protection. If the duration of the spill allows respirators adequate to reduce exposure levels within the 8 hour time weighted average and ceiling limits set forth in the regulations the appropriate respirator should be used. The respirator used during the clean up operation must fit the conditions present in the spill area. The selection of the respirator must be in accordance with US OSHA Regulation and Alaska OSH regulations.

Other personal protective equipment will include, but not be limited to:

- Disposable coveralls, boot cover, hoods
- Hearing Protection.
- Gloves

Hard hats
Eye Protection

TOOL SELECTION

To perform clean up operations the proper tools and equipment must be utilized for a safe and efficient job. It is also important to be familiar with cutting techniques. Always cut away from you, so if it slips, it goes away from the body. The tools could include, but are not limited to:

- HEPA-filter equipped vacuums
- HEPA-filter equipped negative air equipment
- Personal protective equipment (see above section)
- Encapsulant and low pressure spray equipment
- Sponges, mops, buckets

CLEAN UP & DISPOSAL

If the surface permits, a bag can be sealed in place around the spill area. It is a simple process for the worker to further wet the hazardous materials with an encapsulant in a spray bottle and place it into the bottom of the bag. A HEPA-filter equipped vacuum can be inserted in the port on the glove bag until all visible debris has been picked up the surface should be sprayed liberally with an encapsulant. The HEPA-filter equipped vacuum is used to collapse the bag.

If a bag cannot be sealed around the area of the spill, the plastic covering should be lifted at one corner and an encapsulant spray wand inserted to soak the material. After complete saturation is achieved, the debris can be picked up using shovels, dustpans or other suitable tools. If possible, the intake from a HEPA-filter equipped negative air machine should be placed as close to the spill as possible to catch any dust that might become airborne. The saturated debris is double-bagged in disposal bags, sealed, and ready for disposal at an approved site.

AIR MONITORING

If a spill occurs it is crucial that environmental air monitoring be performed to determine how much, if any, contamination occurred. It is also necessary that any person exposed to the debris be notified if the exposure was in excess of OSHA limits. The air monitoring should be performed as soon as possible after the spill, during clean up of the spill, and again after final clean up.

SITE HOUSEKEEPING PROCEDURES

All waste and debris from the demolition of the concrete floor shall be continually picked up and removed to the storage containers. Waste materials will not be left in the area, unpackaged, over night.

Tools and equipment shall be kept off of the floor when not in use.

Cords, hoses and other lines shall be kept off of the floor where practical.

Water from the cutting process shall be continuously vacuumed up and placed in drums until filtered. All water shall be kept off of the floor during the abatement process.

ENGINEERING CONTROLS AND EQUIPMENT

The floor surface will be kept misted (wet) during the removal process. HEPA filtered vacuums will be used for and dust or debris pick up. The work are will be continuously cleaned and debris from the cutting and breaking of the concrete will be picked up on a continuous basis.

HEPA filtered exhaust machines will be used, as necessary, to reduce any dust in the air.

Care must be taken to keep water off of the equipment and machinery in the work area. The mechanical room will be active during the removal of the cement and PCB/Lead paint removal.

MEDICAL SURVEILLANCE

All employees will have been tested for blood lead levels within six months before the start of the project.

All employees will have a medical clearance for the use of respirators and received a complete medical examination within the last 12 months.

MEDICAL REMOVAL PROTECTION

Workers will be continuously monitored during the work. This monitoring will be the daily air monitoring previously referenced in the various plans for this project. If any workers are exposed at or above the PEL they will be removed and have appropriate further testing done. If further testing shows that blood lead levels or PCB exposures are above the allowable limits the worker will be removed from the project and assigned work in an area where there will be no exposure to lead.

EMPLOYEE TRAINING

All workers on the project shall have received hazard communication training for lead and PCB contaminants. This training shall be conducted by a certified industrial hygienist.

Further all workers required to wear respirators shall receive respirator training. All training shall be current (in the last 12 months) for this project. This training shall not expire during the project.

SIGNAGE

The work area shall be demarcated using a combination of polyethylene barriers, warning and caution tape and signs, as appropriate. All signs will meet the requirements for TSCA and RCRA and other applicable regulations. Warning signs shall be placed at such places where the people will have a reasonable opportunity to avoid the work area. Such locations would be the entrance to the work area. Entrances to the floor level of the mechanical room and the areas outside of the building where storage containers may be placed. Signs and barriers outside of the building should be at least 10 feet from the storage containers.

DECONTAMINATION OF EQUIPMENT AND AREAS

All equipment will be decontaminated by wiping down with a detergent and water. After decontamination equipment will be passed out of the work area. Equipment which cannot be decontaminated will be wrapped in polyethylene and sealed before being wiped down and passed out of the work area.

All items remaining in the work area will be wiped down with clean damp cloths. All visible dust will be removed from the work area. Finished floors, the floor material under the topping slab, will be washed with pressure water. The waste water will be filtered, as described in the work plan, before being discharged into the drain system. The waste water will contain the same waste stream as the water generated during the cutting of the topping slab. New waste streams will not be created.

RECORD KEEPING

Daily logs will be kept by the competent person/job foreman. These logs will document the work done each day, workers on site, visitors and any extraordinary events for the day.

Air monitoring records will be kept by the contractor.

All records, required by the specifications, will be submitted to the Owner weekly.

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

John Abrams

has participated in

Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Large half face Air-Purifying Respirator

Model: North Approval: #024-00-02

in accordance with

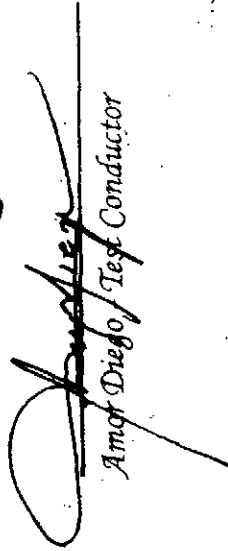
TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and

State of Alaska Administrative Code 8 AAC 61.600

This certificate expires on April 26, 2007

April 26, 2006

Test Date


Amador Diego, Test Conductor

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks, Alaska 99709

(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Barry W Bodle

has participated in

Qualitative Irritant Fume Protocol Fit Test

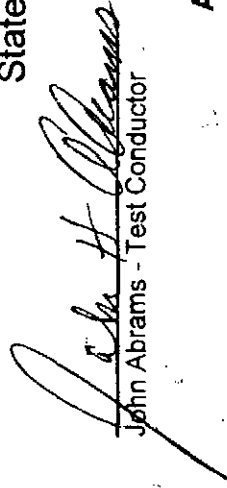
Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Medium $\frac{1}{2}$ Face Dual Cartridge Air-Purifying Respirator

Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and
State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

June 24, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.
3049 Davis Road
Fairbanks, Alaska 99709
(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Christopher J Bodle

has participated in

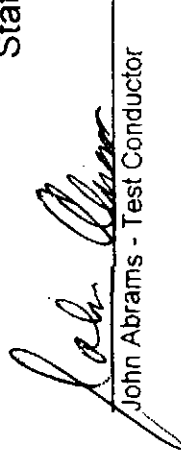
Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Large ½ Face Dual Cartridge Air-Purifying Respirator
Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and
State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

May 19, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.
3049 Davis Road
Fairbanks, Alaska 99709
(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Amor Diego

has participated in

Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Medium half face Air-Purifying Respirator

Model: North Approval: #024-00-02


in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and
State of Alaska Administrative Code 8 AAC 61.600

This certificate expires on April 26, 2007

April 26, 2006

Test Date


John Abrams - Test Conductor

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks, Alaska 99709

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Larry Gilbert

has participated in

Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

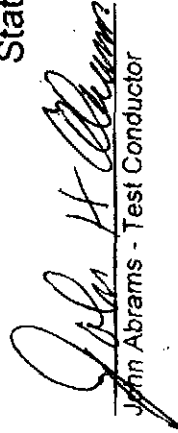
Respirator Used: Medium 1/2 Face Dual Cartridge Air-Purifying Respirator

Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and

State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

July 18, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks, Alaska 99709

(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Jon Gustafson

has participated in

Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

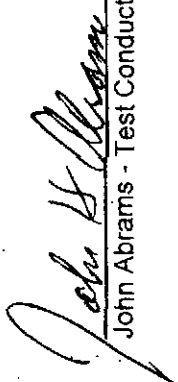
Respirator Used: Large ½ Face Dual Cartridge Air-Purifying Respirator

Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and

State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

July 18, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks, Alaska 99709

(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

John J Middleton

has participated in

Qualitative Irritant Fume Protocol Fit Test

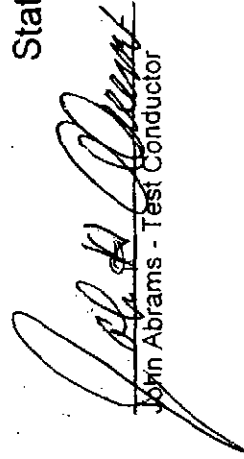
Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Large ½ Face Dual Cartridge Air-Purifying Respirator

Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and
State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

July 18, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.
3049 Davis Road
Fairbanks, Alaska 99709
(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Josiah J Thurneau

has participated in

Qualitative Irritant Fume Protocol Fit Test

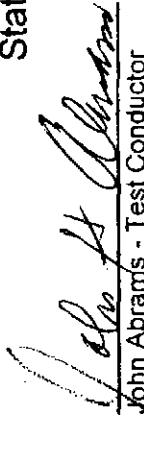
Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Medium ½ Face Dual Cartridge Air-Purifying Respirator

Model: #7700 Approval: #TC-21C-152

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and
State of Alaska Administrative Code 8 AAC 61.600


John Abrams - Test Conductor

June 30, 2006
Test Date

Asbestos Removal Specialists of Alaska, Inc.
3049 Davis Road
Fairbanks, Alaska 99709
(907) 451-8550

Certification of Fit Testing

Asbestos Removal Specialists of Alaska is pleased to certify that

Erin J Vincent

has participated in

Qualitative Irritant Fume Protocol Fit Test

Testing Agent: Sensidyne Gastec Smoke

Respirator Used: Medium half face Air-Purifying Respirator

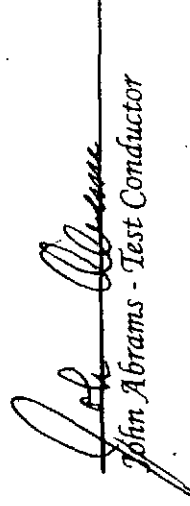
Model: North Approval: #024-00-02

in accordance with

TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR, and

State of Alaska Administrative Code 8 AAC 61.600

This certificate expires on April 26, 2007


John Abrams - Test Conductor

April 26, 2006

Test Date

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks, Alaska 99709

(907) 451-8550



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

ORIGINAL

Medical Evaluation Clearance

Date: 3-10-06 Company: Alaska Rental Services
Employee: John H. Abram SSN: 531-36-7886

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ cleared for use of the following RESPIRATOR subject to fit testing:
 - ☐ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☐ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☐ OTHER:
- ☐ The employees EXIT EXAM has been accomplished.
- ☒ Additional Comments or restrictions:

lead level normal
CXR - no change from prior

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

Elizabeth A. Kohnen, MD, MPH, David S. Grauman, MD, MRO,
Jeanne Clark Chapman, PA-C, Jennifer Inglet, PA-C

Libby Silberman, M.D.

COPIES
3/22/06




Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

Medical Evaluation Clearance

Date: 6/16/06 Company: Asbestos Removal
Employee: Barry Bode SSN: _____

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ cleared for use of the following RESPIRATOR subject to fit testing:
 - ☒ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☐ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☒ OTHER: - lead level pending 
- CXR B read pending
- ☐ The employees EXIT EXAM has been accomplished.
- ☐ Additional Comments or restrictions:

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.


Elizabeth Kohnen, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

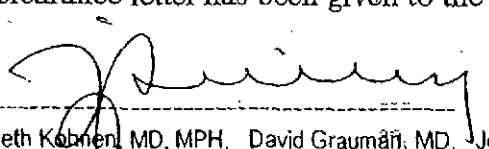
Medical Evaluation Clearance

Date: 05/17/06 Company: ARSA
Employee: Christopher J. Balle SSN: 574-94-6276

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ cleared for use of the following RESPIRATOR subject to fit testing:
 - ☒ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☐ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☒ OTHER: lead level drawn 5/17/06 - pending
- ☐ The employees EXIT EXAM has been accomplished.
- ☒ Additional Comments or restrictions:
5/23/06 lead level received - ok

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.


Elizabeth Kohnen, MD, MPH, David Graumán, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochelath.com

Medical Evaluation Clearance

Date: 4/19/06 Company: A.R.S.A
Employee: Amor Diego SSN: 576-78-0259

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ cleared for use of the following RESPIRATOR subject to fit testing:
☒ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☐ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☒ OTHER: β reading CXR - normal
- ☐ The employees EXIT EXAM has been accomplished.
- ☒ Additional Comments or restrictions:
lead level - normal (low)
sugar level - normal

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

Elizabeth A. Kohnen MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

ORIGINAL

Medical Evaluation Clearance

Date: 5/5/06 Company: Arrowhead Environmental Services
Employee: Larry Gilbert SSN: _____

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ Cleared for use of the following RESPIRATOR subject to fit testing:
☒ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☐ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☒ OTHER: lead test pending
- ☐ The employees EXIT EXAM has been accomplished.
- ☒ Additional Comments or restrictions:
lead test received and normal

FAXED
5/10/06
py

COMPLETED
5/10/06
pu

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

Elizabeth Kohner, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C

Elizabeth A. Kohner

FAXED
5/5/06
pu



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

Medical Evaluation Clearance

ORIGINAL

Date: 5/25/06 Company: ARSD

Employee: Jon Gustafson SSN: _____

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☒ cleared for use of the following RESPIRATOR subject to fit testing:
☒ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☒ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☒ cleared for CDL/ICC work. for 1 yr only
- ☐ cleared for ANIMAL CARE duties.
- ☐ OTHER: lead level pending 5/25/06 lead level normal
- ☐ The employees EXIT EXAM has been accomplished.
- ☐ Additional Comments or restrictions:

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

Jeanne Clark Chapman

Elizabeth Kohlen, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C

Elizabeth

5/26/06
(PW)



Alaska Occupational Health
1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

ORIGINAL

Medical Evaluation Clearance

Date: 7/13/06 Company: Asbestos Removal Spec of AK
Employee: John J. Middleton SSN: 001-30-1550

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☐ cleared for use of the following RESPIRATOR subject to fit testing:
 - ☐ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☐ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☒ cleared for CDL/ICC work. *for 1 yr.*
- ☐ cleared for ANIMAL CARE duties.
- ☐ OTHER:
- ☐ The employees EXIT EXAM has been accomplished.
- ☐ Additional Comments or restrictions:

Elizabeth A. Kohner

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

David Grauman
Elizabeth Kohner, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C

COMPLETED
7/13/06
(14)



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

Medical Evaluation Clearance

Date: 6/15/06 Company: ARSA
Employee: Josiah Thurneen SSN: _____

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

- ☐ cleared for use of the following RESPIRATOR subject to fit testing:
 - ☐ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA
- ☐ cleared for use PROTECTIVE CLOTHING without restriction.
- ☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.
- ☐ in compliance with BENZENE surveillance and has no medical findings.
- ☐ cleared for HAZARDOUS MATERIAL work.
- ☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.
- ☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.
- ☐ cleared for DIVER or underwater worker activities.
- ☒ cleared for CDL/ICC work.
- ☐ cleared for ANIMAL CARE duties.
- ☐ OTHER:
- ☐ The employees EXIT EXAM has been accomplished.
- ☐ Additional Comments or restrictions:

Lead level + Breeding pending
6/19/06 lead level wasn't done - Breeding normal

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

6/20 lead level negative.

Elizabeth A. Kohnen

Elizabeth Kohnen, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C

Elizabeth A. Kohnen

ORIGINAL

COMPLETED
6/22/06



Alaska Occupational Health

1919 Lathrop St., #203, Fairbanks, AK 99701
456-2825 fax 451-0742 www.akochealth.com

ORIGINAL

Medical Evaluation Clearance

Date: 4/6/06 Company: ARSA
Employee: Evin Vincent SSN: _____

The above named employee was seen for a medical evaluation in compliance with OSHA and/or specific industry standards/recommendations. Based on these findings the employee is:

☐ cleared for use of the following RESPIRATOR subject to fit testing:
☐ All ☐ dust mask ☐ 1/2 face ☐ full face ☐ supplied air ☐ air purifying ☐ SCBA

☐ cleared for use PROTECTIVE CLOTHING without restriction.

☒ cleared for work with ASBESTOS including using a respirator assuming all applicable safety precautions are taken. They have received material explaining the risks of asbestos and have been reminded of the increased risk of lung cancer attributed to asbestos exposure and smoking.

☐ in compliance with BENZENE surveillance and has no medical findings.

☐ cleared for HAZARDOUS MATERIAL work.

☐ able to meet the PRE-EMPLOYMENT requirements you have set forth.

☐ cleared for FIREFIGHTER duties in accordance with the NFPA Standards including approval for all types of respirators.

☐ cleared for DIVER or underwater worker activities.

☒ cleared for CDL/ICC work.

☐ cleared for ANIMAL CARE duties.

☒ OTHER: head level normal

☐ The employees EXIT EXAM has been accomplished.

☒ Additional Comments or restrictions:

advised quit cigarette smoking
next CXR due 2007, none needed at this time

COMPLETED
4/11/06
ew

The results of the evaluation were explained to the employee at the time of the exam. A copy of this clearance letter has been given to the employee to meet regulations.

Elizabeth Kohlen
Elizabeth Kohlen, MD, MPH, David Grauman, MD, Jeanne Chapman, PA-C, Libby Silberling, PA-C

Elizabeth A. Kohlen

PROCEDURES FOR DUST CONTROL

All work which might raise dust, cutting of cement, will be done under wet conditions. Equipment used for cutting concrete is designed to wet the cutting blade while cutting. Continuous wetting during any process which may raise dust will be done while cutting and removing the topping slab.

Additionally HEPA filtered exhaust machines will be used during the project (see note on drawing). The exhaust from these machines will be exhausted to the exterior of the building. Machines will be located near the cutting operation in space available.

PROCEDURES FOR PREVENTION AND RESPONSE TO UNANTICIPATED/UNAUTHORIZED RELEASES

The best prevention for unanticipated releases is worker training. All workers will be trained in the handling of the waste from the project. Workers will carefully handle waste taking care not to drop or cause damage to the waste. Materials will be kept wet during the cutting and removal process.

CONTAINMENT AREA BREACHES

Major Breaches of Containment Barrier: In the event of a major breach of the containment area all work will cease and repairs will be made to the breach. Environmental air sampling, by the Contractor, will immediately begin in the areas adjacent to the breach. Air sampling will continue until such time the breach is repaired and the Contracting Officer has given approval to restart work. All other workers will be evacuated from the area until such time it is determined by the Contracting Officer that there are no hazardous materials in the air outside of the regulated area. Written notification by the Contracting Officer will be required for resumption of work, both inside and outside of the containment area where the breach occurred. Other trades will be made aware of the containment activities and cautioned of the consequences of a breach of the area.

DETECTION OF UNSUSPECTED CONTAMINATION

If unsuspected waste dust is detected outside of the work area, in excess of ambient, all work will stop immediately and the source of the contamination will be determined. All workers outside of the work area will be evacuated from the area and the area secured until such time the source is found and corrected and the contamination concentrations are determined to be ambient or less and written permission, by the Contracting Officer, is given to re-enter the area.

HANDLING OF RELEASES

During the cutting, handling, loading, unloading, or transportation of hazardous materials, a "release" or "spill" may occur. This contingency is the reason that all workers handling the hazardous materials waste are required to wear respiratory protection and disposable clothing, and the reason that all PCB waste is to be kept wet until the disposal container is sealed.

For this project all paint removed will be placed in drums with the lids securely fastened and the rupture of the drum would require containment of the liquid. The concrete will be in slabs with the PCB materials imbedded in the concrete. Sludge from the concrete cutting will be placed in drums and the lids securely fastened.

If an hazardous materials container ruptures the first action is to isolate the materials. Specific action will depend upon where the spill occurs. If the containers consist of hazardous materials rupturing during loading, unloading, or transport, the spill should be immediately contained. If the spill should be covered with polyethylene and prevented from running on the ground if liquid.

All nonessential personnel should be evacuated from the area immediately. Project management should be notified of the spill so that air monitoring can be performed. Workers should gather necessary equipment to clean up the spill and, if necessary, respiratory protection upgraded to meet elevated exposure levels. (If the hazardous materials waste was kept wet until sealed in the disposal container, release levels will be very low.) If possible, a HEPA-filter equipped negative air machine should be put into operation.

Any person not protected by disposable clothing and respirators should proceed to the personnel decontamination station, remove all clothing and shower completely. The contaminated clothing can be taken to an approved laundry inside a plastic bag with appropriate warning labeling affixed. The person exposed can be given clean disposable clothing to wear until his/her clothing is properly cleaned.

In the case of personnel equipped with the proper personal protective equipment, immediate decontamination is unnecessary. The hazardous materials spill should be cleaned up immediately using all necessary tools. If respirator protection can be immediately determined then appropriate respirators should be used.

If the surface permits, a glove bag can be sealed in place around the spill area. It is a simple process for the worker to further wet the hazardous materials with an encapsulant in a spray bottle and place it into the bottom of the glove bag. A HEPA-filter equipped vacuum can be inserted in the port on the glove bag to all visible debris has been picked up the surface should be sprayed liberally with an encapsulant. The HEPA-filter equipped vacuum is used to collapse the glove bag. It is sealed and placed inside a disposal bag for disposal.

If a glove bag cannot be sealed around the area of the spill, the plastic covering should be lifted at one corner and an encapsulant spray wand inserted to soak the material. After complete saturation is achieved, the debris can be picked up using shovels, dustpans or other suitable tools. If possible, the intake from a HEPA-filter equipped negative air machine should be placed as close to the spill as possible to catch any dust that might become airborne. The saturated debris is placed in the disposal drums, sealed, and ready for disposal at an approved disposal site.

Environmental air monitoring should begin as soon as possible outside of the spill area. The Contractor shall continue air monitoring until such time as the Contracting Offices declares the spill cleaned up and the area safe for occupancy.

Emergency Numbers for this Project:

Juneau Fire and Ambulance	911
ARSA Office	451-8550
John Abrams	322-0709
Building Manager	
Consultant (Matt White)	748-2730
Project Foreman	(Amor Diego) 890-0889

PROCEDURES FOR WATER CONTROL AS RELATED TO RUNOFF GENERATED DURING ABATEMENT AND TIDE INFLUENCES.

During abatement all drains will be temporarily plugged to prevent contaminated waste from entering the drains. Waste waters, and tidal influence waters, will be filtered through cloth filters graduated down to 5 microns and then be filtered through activated charcoal to remove all PCB's. All filters will be disposed as contaminated waste.

Waste from the cutting of the concrete will be vacuumed up as it is created and not left to accumulate on the floor. All floors shall be cleaned of any cutting debris at the end of each shift.

During certain tidal actions there are two 4" holes in the floor which have water come up through them. These holes will be plugged with plumbing pressure test plugs through the abatement process.

The building Owner's manager will be consulted to determine the level of tides which may cause water problems in the area. Tides will be monitored, and if water appears from the tidal influence work will be stopped until such time the possibility of such has passed.

The reason the Owner will be consulted is that the Owner knows what tide levels will cause the problems. The Contractor will monitor the tides to determine if there will be a problem or not. It is practical for the Contractor to consult with the Owner to address this problem.

It is known and understood that this water will be contaminated and will have to be dealt with as contaminated waste. The water will be treated as described in other parts of this submittal.

The specifications very clearly state that there may be a water incursion problem. The Contractor has taken this into account in his bid. Why the question of who would pay for work stoppage is addressed is not known.

It is necessary to monitor for potential water incursion because it will effect the work. The effect is that the water which may enter into the work area would have to be considered contaminated thus would also need to be run through the decontamination process. Water on the surface of the floors could also present a problem for workers in slips and falls. Also water on the surface of the work area could present a problem with electrical equipment being used in the area.

SITE INSPECTION PROCESS/LOGS/DOCUMENTS

Daily logs will be kept of the work progress. These logs will be kept by the competent person and copies forwarded to the project manager weekly.

The Contractor shall inspect the work area daily to assure that all contaminated materials are properly handled, stored, marked and readied for transportation.

The Contractor shall cooperate with the Owners representative on any inspections the Owner wishes to accomplish.

All Contractor inspection reports, logs and other documentation shall be forwarded to the Owners representative weekly.

PROCEDURES FOR PERSONNEL AND EQUIPMENT CLEANUP/DECONTAMINATION

Personnel will remove protective clothing at the edge of the regulated area and wash hands and face before leaving area. Workers shall not eat, drink, smoke or chew tobacco or gum while in the work area. All protective clothing shall be disposed of as contaminated waste and shall be properly placed in leak tight containers when disposed of.

Equipment shall be wiped down when the work is done with damp cloths. All equipment shall be passed out of the work area after it is cleaned. Cloths used for cleaning equipment shall be disposed of as contaminated waste.

PCB/LEAD-CONTAINING WASTE CHARACTERIZATION MANAGEMENT AND DISPOSAL PLAN

Waste streams will include:

1. Solid concrete slabs.
2. Slurry from cutting of slabs
3. Water from pressure washing "finished slabs"
4. Tidal incursion water
5. Paint waste from paint removal
6. Disposable clothing, rags and other cleaning equipment
7. All filters from water purification process

Concrete slabs will be placed in a lined container provided by Phillips Services, the company contracted to transport and dispose of all of the hazardous waste. As each container is filled it will be moved to an accumulation site arranged by Phillips.

The slurry will be stored in drums. The excess water will be filtered through filtering cloths and then through activated charcoal to remove all residual PCB or other containments.

Paint residue will be stored in drums. Arrangements will be made with Phillips for pick up and transportation.

PPE and all other item related to the removal of the paint will be placed in drums at contaminated waste and disposed of by Phillips.

Any containers moved out of the work area will be stored in a locked container unit, which will be used for transportation to the disposal site.

All waste will be place in UN/DOT approved containers and labeled appropriately with labels provided by Phillips.

John Abrams

From: "Nielsen, Paul" <PNielsen@pscnw.com>
To: <arsa@acsalaska.net>
Sent: Monday, August 07, 2006 11:31 AM
Subject: Disposal Cert wording

Certificates of Treatment, Recycling and/or Disposal are issued when all waste streams recorded on the receiving manifest have been managed in accordance with facility permits. The Certificate of Treatment, Recycling, and Disposal details treatment processes and final disposition of the waste. The certification system provides generators confirmation that their wastes have been properly managed and disposed. The issuance of these certificates complete the RCRA/TSCA "cradle to grave" philosophy and relieves the customer of future liabilities. The certificates are computer-generated and are designed to match manifests exactly.

W. Paul Nielsen III
Sales Manager - Alaska
PSC Environmental Services
1813 E. 1st Ave. Suite 101
Anchorage, Alaska 99501
(907) 272-9007 Phone
(907) 272-6805 FAX
pnelsen@pscnw.com

John Abrams

From: "Nielsen, Paul" <PNielsen@pscnow.com>
To: <arsa@acsalaska.net>
Sent: Monday, August 07, 2006 11:28 AM
Subject: More words for PCB transportation

PSC will use Hazardous Waste Manifests for transportation of all material which is regulated by 40 CFR 261(RCRA) or 40 CFR 761(PCB). Manifests will be completed meeting all the requirements of 40 CFR 262 subpart B-Manifest, 49 CFR 172 subpart B-Table of Hazardous Materials and Provisions, subpart C-Shipping Papers and subpart G-Emergency Response Information. A PCB Control sheet will be attached to all PCB Manifests fulfilling the requirements of 40 CFR 761.207-Manifest General Requirements. Land Disposal Restriction Notifications (LDR's) and, if necessary, Canadian Manifests, Canadian Transit Notices, and Canadian Written Confirmation will be completed by PSC personnel to begin transportation materials from Alaska.

***W. Paul Nielsen III
Sales Manager - Alaska
PSC Environmental Services
1813 E. 1st Ave. Suite 101
Anchorage, Alaska 99501
(907) 272-9007 Phone
(907) 272-6805 FAX
pnielsen@pscnow.com***

John Abrams

From: "Nielsen, Paul" <PNielsen@pscnow.com>
To: <arsa@acsalaska.net>
Sent: Monday, August 07, 2006 11:26 AM
Subject: PCB waste transporters and disposal Facility

LANDFILL for TSCA regulated waste**Chemical Waste Management**

17629 Cedar Springs Lane
Arlington, OR 97812
ORD 089 452 353

Alaska Marine Lines (206) 763-4244	WAD991281809	Barges	RCRA, TSCA, & Nonreg waste
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Union Pacific Railroad
1416 Dodge Street
Omaha, NE 68179
WAH 000 013 698 or NED 001 792 910

W. Paul Nielsen III
Sales Manager - Alaska
PSC Environmental Services
1813 E. 1st Ave. Suite 101
Anchorage, Alaska 99501
(907) 272-9007 Phone
(907) 272-6805 FAX
pnielsen@pscnow.com



Environment
Canada

Environnement
Canada

Larry Reiter
Philip Services Corp.
1813 E. 1st Ave., Suite 201
Anchorage, Alaska
United States of America
99501

17 March 2006 / 17 mars 2006

**TRANSIT PERMIT FOR HAZARDOUS WASTE/HAZARDOUS RECYCLABLE
MATERIAL**

Issued Under Subparagraph 185(1)(b)(ii) of the *Canadian Environmental Protection Act, 1999*
**PERMIS DE TRANSIT POUR DÉCHETS DANGEREUX/MATIÈRES RECYCLABLES
DANGEREUSES**

Délivré en vertu du sous-alinéa 185(1)(b)(ii) de la *Loi canadienne sur la protection de
l'environnement (1999)*

File Number / No. de dossier : 06/00017/TRS

This TRANSIT PERMIT is issued to Philip Services Corp. in accordance with subparagraph 185(1)(b)(ii) of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) for the transit of the hazardous wastes/hazardous recyclable materials described below from the United States of America through Canada on route to the United States of America.

Le présent PERMIS DE TRANSIT est délivré à Philip Services Corp. en vertu du sous-alinéa 185(1)(b)(ii) de la *Loi canadienne sur la protection de l'environnement (1999)* (LCPE (1999)) pour le transit des déchets dangereux/matières recyclables dangereuses décrits ci-après des États-Unis d'Amérique par le Canada à destination des États-Unis d'Amérique.

This TRANSIT PERMIT is valid for the period of 17 March 2006 to 16 March 2007.

Ce PERMIS DE TRANSIT est valide du 17 mars 2006 au 16 mars 2007.

**Waste/Material Description for 16 Hazardous Wastes/Hazardous Recyclable Materials /
Description de déchet/matière pour 16 déchets dangereux/matières recyclable dangereuses**

1) Q14/R01/LA1/C42/H3/A950/Y42+46

PIN / NIP : UN1993

Class / Classe : 3

Quantity / Quantité : 2,000,000 kg

HS Code / Code HS : 2707.50.00.10

Notice / Notification : 502310

EIHWHRMR ID # :

No. d'identité REIDDMRD : F003

OECD Code / Code OCDE : A4060

Packing Group / Groupe d'emballage : I



- 2) Q14//R04//S25//C16//H8//A950//Y29+46
 PIN / NIP : UN2809 EIHWHMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 500,000 kg OECD Code / Code OCDE : A1030
 HS Code / Code HS : 2805.40.00.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 3) Q07//R04//S38//C22+24//H8//A950//Y35+46
 PIN / NIP : UN3028 EIHWHMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg OECD Code / Code OCDE : A1170
 HS Code / Code HS : 8506.10.10.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 4) Q07//R04//S38//C18+23//H8//A950//Y31+34
 PIN / NIP : UN2794 EIHWHMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg OECD Code / Code OCDE : A1160
 HS Code / Code HS : 8507.10.00.10 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 5) Q07//R04//L37//C22+24//H8//A950//Y35+46
 PIN / NIP : UN2795 EIHWHMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg OECD Code / Code OCDE : A1170
 HS Code / Code HS : 8507.80.90.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 6) Q14//R01//L12//C41//H3//A950//Y12+41+46
 PIN / NIP : UN1263 EIHWHMR ID # :
 Class / Classe : 3 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg OECD Code / Code OCDE : A4070
 HS Code / Code HS : 3209.90.00.20 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 7) Q04+05//D13//L41//C51+16+18//H13//A935//Y09+29+31
 PIN / NIP : UN3082 EIHWHMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : L036
 Quantity / Quantité : 20,000,000 kg Basel Code / Code Bâle : A4060
 HS Code / Code HS : 2710.19.20.22 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310
- 8) Q07//D09//L41//C23//H8//A935//Y34+46
 PIN / NIP : UN1760 EIHWHMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A4090
 HS Code / Code HS : 2806.10.00.90 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310

- 9) Q07//D09//S41//C23//H8//A935//Y34+46
 PIN / NIP : UN1759 EIHWHRMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2810.00.00.20 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 10) Q14+12//D05//S10//C32//H12//A936//Y10
 PIN / NIP : UN2315 EIHWHRMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 100,000 kg Basel Code / Code Bâle : A3180
 HS Code / Code HS : 2710.91.99.00 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 11) Q14+12//D10//L10//C32//H12//A931//Y10
 PIN / NIP : UN2315 EIHWHRMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A3180
 HS Code / Code HS : 2710.91.99.00 Packing Group / Groupe d'emballage : II
 Notice / Notification : 502310
- 12) Q14//D10//G36//C42+44//H0//A931//Y42+46
 PIN / NIP : UN1950 EIHWHRMR ID # :
 Class / Classe : 2.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2711.12.10.00 Packing Group / Groupe d'emballage : NA
 Notice / Notification : 502310
- 13) Q07//D09//L41//C24//H8//A935//Y35+46
 PIN / NIP : UN1719 EIHWHRMR ID # :
 Class / Classe : 8 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 1,000,000 kg Basel Code / Code Bâle : A4090
 HS Code / Code HS : 2815.12.00.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 14) Q14//D05//L41//C39//H6.1//A935//Y03+39+46
 PIN / NIP : UN2810 EIHWHRMR ID # :
 Class / Classe : 6.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2918.90.10.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310
- 15) Q14//D05//S41//C39//H6.1//A935//Y03+39+46
 PIN / NIP : UN2811 EIHWHRMR ID # :
 Class / Classe : 6.1 No. d'identité REIDDMRD : N.A.
 Quantity / Quantité : 20,000 kg Basel Code / Code Bâle : A4140
 HS Code / Code HS : 2918.90.10.00 Packing Group / Groupe d'emballage : I
 Notice / Notification : 502310

16) Q04+05//D13//S41//C51+16+18//H13//A935//Y29+31+41
 PIN / NP : UN3077 EIHWHMR ID # :
 Class / Classe : 9 No. d'identité REIDDMRD : L036
 Quantity / Quantité : 2,000,000 kg Basel Code / Code Bâle : A1020
 HS Code / Code HS : 2805.40.00.00 Packing Group / Groupe d'emballage : III
 Notice / Notification : 502310

From / De:

Philip Services Corp.
 1813 E. 1st Ave., Suite 201
 Anchorage, Alaska
 United States of America
 99501

To / À:

Philip Services Corp.
 20245-77th Ave. South
 Kent, Washington
 United States of America
 98032

5 Authorized Carriers / 5 Transporteurs Agréés

Alaska Marine Lines
 Northland Services Inc.
 Samson Tug & Barge

Alaska Railbelt Marine, L.L.C.
 Philip Services Corp.

**4 Ports of Entry, Exit and Customs Offices /
4 Points d'entrée, de sortie et bureaux de douane**

EN:Beaver Creek / Alcan
 EX:Abbotsford / Sumas

EN:Dixon Entrance (Marine Movements)
 EX:Exit from the Strait of Juan de Fuca
 (Marine Movements)

Please take note that it is your responsibility to ensure that the requirements set out in the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWHMR) made pursuant to CEPA 1999 are complied with during the time of the movement of the hazardous wastes/hazardous recyclable materials described in this permit while it is transiting through Canada. This includes, but is not limited to, ensuring that the authorized carriers of the hazardous wastes/hazardous recyclable materials described in this permit are insured in accordance with section 37 of the EIHWHMR.

Veuillez prendre note qu'il vous incombe de vous assurer que vous respectez, lors du transit des déchets dangereux/matières recyclables dangereuses décrits dans ce permis transitant le Canada, les exigences établies dans le *Règlement sur l'exportation et l'importation de déchets dangereux et de matières recyclables dangereuses* (REIDDMRD) pris en vertu de la LCPE (1999). Ces exigences comprennent notamment l'obligation de vous assurer que les transporteurs agréés des déchets dangereux/matières recyclables dangereuses décrits dans ce permis, détiennent une police d'assurance conformément à l'article 37 du REIDDMRD.

It is your responsibility to ensure that you are in compliance with all other applicable Canadian laws.

Vous devez vous assurer de respecter toutes les autres lois canadiennes applicables.

The transit of hazardous wastes or hazardous recyclable materials, in violation of CEPA 1999 or the EIRWHMR, may be prosecuted as an offence under section 272 or 273 of CEPA 1999.

Tout transit de déchets dangereux ou de matières recyclables dangereuses qui contrevient à la LCPE (1999) ou au REIDDMRD peut entraîner une poursuite pénale en vertu de l'article 272 ou 273 de la LCPE (1999).

Signed for and on behalf of the Minister of the Environment /
Signé au nom du ministre de l'Environnement



France Jacovella, ing. P.Eng.
Director / Directrice
Waste Management Division / Division de la gestion des déchets
Pollution Prevention Directorate / Direction générale de la prévention de la pollution
Environment Canada / Environnement Canada

NOTICE - NOTIFICATION

Notice Reference No. - N° de référence du notification
502310Administrative form for proposed movements of hazardous waste or hazardous recyclable material
Formulaire administratif en vue des mouvements de déchets dangereux et matières recyclables dangereuses


Pg. 1 of 4

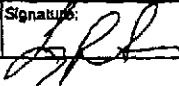
1 OPTION Indicate the option that applies to the notification / Indiquez l'option qui s'applique à la notification <input type="checkbox"/> Disposal / Élimination <input checked="" type="checkbox"/> Recycling / Recyclage <input type="checkbox"/> Recycling, Pre-approved Facility / Recyclage, installation approuvée au préalable			
2 EXPORTER OR FOREIGN EXPORTER EXPORTATEUR OU EXPORTATEUR ÉTRANGER Registration Number / N° d'identification: AKO 983068602 Name / Nom: PHILIP SERVICES CORP. Address / Adresse: 1813 E. 1st Ave Anch, AK 99501		3 FOREIGN RECEIVER OR IMPORTER DESTINATAIRE ÉTRANGER OU IMPORTATEUR Registration Number / N° d'identification: WAD 991281767 Name / Nom: PHILIP SERVICES CORP. Address / Adresse: 20245 77th Ave. S. Kent, WA. 98032	
Tel. No. / N° de tél.: (907) 272-9007	Fax No. / N° de tél.: (907) 272-6805	Tel. No. / N° de tél.: (253) 872-8030	Fax No. / N° de tél.: (253) 395-0377
E-mail address / Adresse électronique: lreiter@pscnw.com	Contact person / Personne ressource: LARRY REITER	E-mail address / Adresse électronique: kdiestrich@pscnw.com	Contact person / Personne ressource: CHRIS DIETRICH
Name of Insurance Company / Nom de l'assureur: FRANK CRYSTAL & CO OF TX	Policy No. / N° Police: XSLG21713867	Name of Insurance Company / Nom de l'assureur: FRANK CRYSTAL & CO OF TX	Policy No. / N° Police: XSLG21713867
4 CARRIER TRANSPORTEUR Registration Number / N° d'identification: Name / Nom: SEE ATTACHED Address / Adresse: LISTS Mode of Transport / Mode de transport: <input type="checkbox"/> Road / Route <input type="checkbox"/> Rail / Rail <input type="checkbox"/> Marine / Mer <input type="checkbox"/> Air / Air If other carrier used, attach a list of the carrier's name, address, and phone number. <input type="checkbox"/> Attached / ci-joint		5 AUTHORIZED FACILITY (IF OPERATION D13, D14, D17, R12, R13, R18) INSTALLATION AGREEE (DANS LE CAS DES OPÉRATIONS D13, D14, D17, R12, R13, R18) Registration Number / N° d'identification: Name / Nom: N/A Address / Adresse: N/A Receiving Site Address / Adresse du site de réception:	
Tel. No. / N° de tél.:	Fax No. / N° de tél.:	Line No. / N° de la ligne:	D/R code / Code D/R
E-mail address / Adresse électronique:	Contact person / Personne ressource:	Tel. No. / N° de tél.:	Fax No. / N° de tél.:
Name of Insurance Company / Nom de l'assureur:	Policy No. / N° Police:	E-mail address / Adresse électronique:	Contact person / Personne ressource:

SHIPPING DETAILS - DÉTAILS SUR LES ENVOIS

6 NUMBER OF EXPORTS OR IMPORTS NOMBRE D'EXPORTATIONS OU D'IMPORTATIONS: 100		7 Port of Exit / Entry or Customs Office(s) Bureau(s) de douane ou Point de sortie / d'entrée		Attached / ci-joint	
8 FIRST AND LAST SHIPMENT PREMIER ET DERNIER ENVOI: FIRST 01/01/14 LAST 01/01/14		9 TRANSIT COUNTRY (IES) PAYS DE TRANSIT: N/A		Length of Stay / Durée du transit: TRANSIT ONLY	
10 Hazardous Information / Renseignements dangereux International Waste Identification Code Code international d'identification des déchets		Base of Origin / Origine App. 4 code / App. 4 Code OCDE		TOOR PIN N° de l'ITND	
914/RI/L41/C42/H3/A950/H444		A4060		UN 1993	
Quantity / Quantité: 2,000,000		Class / Classe: 3		Packaging / Emballage: PGD	
11 EXPORTS OF HAZARDOUS WASTE: Options considered for reducing or phasing out the waste and the reason the disposal is happening outside of Canada EXPORTATION DE DÉCHETS DANGEREUX: Solutions envisagées pour réduire ou pour supprimer les déchets et les raisons pour l'élimination en lieu étranger		Description of the D/R process to be used Description du processus D/R mis en œuvre		ENERGY RECOVERY	
12 STATEMENT OF PERSON SUBMITTING THE NOTICE: In the case of an export or import, the contract(s) referred to in paragraph 9(1) or 10(a) shall be in force and if the waste or material cannot be recycled in accordance with the export or import permit, the exporter or importer will undertake alternative arrangements required under the Regulations or will return the waste or material to the facility from which it was imported in accordance with s. 54 or 55. In the case of an export, import or transit, the insurance policy will cover the period specified by the Regulations and the information in the notice is complete and correct. DÉCLARATION PAR L'AUTEUR DE LA NOTIFICATION: Dans le cas d'une exportation ou d'une importation, le contrat(s) visé(s) aux articles 9(1) ou 10(a) est en vigueur et si les déchets ou matières ne peuvent être recyclés conformément au permis d'exportation ou d'importation, l'exportateur ou l'importateur s'engage à prendre les mesures de retour prévues par le Règlement ou à les ramener à l'installation d'origine conformément aux articles 54 ou 55. Dans le cas d'une exportation, importation, ou transit, la police d'assurance sera maintenue en vigueur sur la période spécifiée par le Règlement, et les renseignements fournis sont complets et exacts.		Signature: LARRY REITER		Date: 06/02/14	
Name / Nom: LARRY REITER		Signature: [Signature]		Tel. No. / N° de tél.: (907) 272-9007	

Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/R4/S25/C16/H8/A950/Y2B+46	A1030	UN2809	B	500,000 Kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2808.40.00 00	N/A	N/A	Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S3M/C22+24/H8/A950/Y3E+4B+24	A1170	UN3025	8	100,000 kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
8506.10.10 00	N/A	N/A	Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S3S/C18+23/H8/A950/Y31+34	A1160	UN2794	8	20,000 kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
8507.10.00 10	N/A	N/A	Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q7/R4/S3S/C22+24/H8/A950/Y3E+46	A1170	UN2795	B	20,000 kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
8507.50.90 00	N/A	N/A	Recovery of metals		
Hazardous Information / Renseignements dangereux International Waste Identification Code Code International d'identification des déchets	Basel Annex VIII or OECD App. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14/R1/L12/C41/H3/A950/Y12+4B+41	A4070	UN1285	3	1,000,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
3209.90.00 20	N/A	N/A	Energy recovery		
Name: Nom:	Signature:	Date: 06/2/14	Telephone No: N° de tél.: 807-272-8007		

Hazardous Information / Renseignements dangereux International Waste Identification Code Classe internationale d'identification des déchets	Basel Annex VIII or OECD Ann. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
04+6HD13/L11/RC31+16+16H113/A935/Y9+31+20	A4080	UN3082	9	20,000,000 kg	PG III
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.19.20 22	L36, L17, U019	N/A	Blending or mixing prior to any operations D1 to D12		
Hazardous Information / Renseignements dangereux International Waste Identification Code Classe internationale d'identification des déchets	Basel Annex VIII or OECD Ann. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q71/D8/L41/C23/H4/A935/Y34+46	A4080	UN1780	8	1,000,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2806.10.00 80	N/A	N/A	Physical or chemical treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Classe internationale d'identification des déchets	Basel Annex VIII or OECD Ann. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q71/D8/L41/C23/H4/A935/Y34+46	A4140	UN1759	8	100,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2810.00.00 20	N/A	N/A	Physical or chemical treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Classe internationale d'identification des déchets	Basel Annex VIII or OECD Ann. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14+12/D8/S10/C32/H12/A935/Y10	A3180	UN2315	8	100,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.81.99 00	N/A	POP 8 Polychlorinated Biphenyls 10,000 Kg 150,000 PPM	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Classe internationale d'identification des déchets	Basel Annex VIII or OECD Ann. 4 code / Annexe VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMC	Class Classe	Quantity Quantité	Packing/Risk Group / Groupe d'emballage / risque
Q14+12/D10/L10/C32/H412/A931/Y10	A3180	UN2315	9	1,000,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 à 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en œuvre		
2710.81.99 00	N/A	POP 8 Polychlorinated Biphenyls 1,000,000 Kg 150,000 PPM	Incineration of land		
Name: Nom:	Signature: 	Date: 06/2/14	Telephone No: N° de tél.: 907-272-6007		

Hazardous Information / Renseignements dangereux International Waste Identification Code Cide International d'identification des dechets	Basel Annex VIII or Oecd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantite	Packing/Risk Group / Groupe d'emballage / risque
Q14/D10/D38/K42+44/H/A931/Y42+48	A4140	UN 1950	2.1	20,000 kg	N/A
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 a 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2711.12.10 00	N/A	N/A	Incineration at Land		
Hazardous Information / Renseignements dangereux International Waste Identification Code Cide International d'identification des dechets	Basel Annex VIII or Oecd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantite	Packing/Risk Group / Groupe d'emballage / risque
Q7/D8/L41/K24/H8/A835/Y35+48	A4080	UN1719	8	1,000,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 a 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2815.12.00 00	N/A	N/A	Physical or Chemical Treatment		
Hazardous Information / Renseignements dangereux International Waste Identification Code Cide International d'identification des dechets	Basel Annex VIII or Oecd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantite	Packing/Risk Group / Groupe d'emballage / risque
Q14/D5/L41/C39/H6.1/A935/Y3+48+38	A4140	UN2810	6.1	20,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 a 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2018.00.10 00	N/A	N/A	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Cide International d'identification des dechets	Basel Annex VIII or Oecd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantite	Packing/Risk Group / Groupe d'emballage / risque
Q14/D5/S41/C39/H6.1/A935/Y3+48+39	A4140	UN2811	6.1	20,000 kg	PG I
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 a 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2018.00.10 00	N/A	N/A	Engineered Landfill		
Hazardous Information / Renseignements dangereux International Waste Identification Code Cide International d'identification des dechets	Basel Annex VIII or Oecd App. 4 code / Annex VIII de Bale ou app. 4 code OCDE	TDGR PIN NIP du RTMD	Class Classe	Quantity Quantite	Packing/Risk Group / Groupe d'emballage / risque
Q4+Q8/D13/S41/C51+16+18/H13/A935/Y41+31+29	A1020	UN3077	9	2,000,000 kg	PG II
Customs Code: Code de douane:	ID No & Description of Sch. 3-7 N° d'id et description du Ann. 3 a 7	POP name, quant. & conc. POP nom, quant. & conc.	Description of the D/R process to be used / Description du processus D/R mis en oeuvre		
2805.40.00 00	L38, L17, U019	N/A	Blending or mixing prior to any operations D1 to D12		
Name: Nom:	Signature: 	Date: 06/2/14	Telephone No: N° de tel.: 907-272-9007		

5

Customs Offices
Bureaux de douane

Entry into Canada: **Dixon Entrance B.C., Beaver**
Entrée au Canada: **Creek Y.T., Pleasant Camp B.C.**

Exit from Canada: **Strait of San Juan De Fuca B.C.**
Sortie du Canada: **Abbotsford B.C., Beaver Ck. Y.T.**

Others:
Autres :

CARRIER TRANSPORTEUR	
Registration Number: AKD 070 973 300 and WAD 070 973 300 N° de licence ou de permis:	
Name: Nom: Alaska Marine Lines Address: Adresse: 7100 Second Avenue South PO Box 24248 Seattle, WA 98106	Mode of Transport: Mode de transport: <input type="checkbox"/> Road / Route <input type="checkbox"/> Rail / Rail <input checked="" type="checkbox"/> Marine / Mer <input type="checkbox"/> Air / Air If other carriers used, attach a list. S'il y a d'autres transporteurs, annexez une liste <input type="checkbox"/> Attached / ci-joint
Tel. No.: N° de tel.: 206-763-4244	Fax No.: N° de telec.: 206-764-5782
E-mail address: Adresse electronique: nats@aml.lynden.com	Contact Person: Personne ressource: Natalie Stephenson
Name of Insurance Company: Nom de l'assureur: Marsh USA Inc.	Policy No.: N° Police: HDOG21713703

PROJECT DOCUMENTATION PHOTOGRAPHS, FORMS AND DAILY LOGS TO BE USED

Photographs will be taken as necessary to document the project progress, problems areas, work practices and completed work.

Daily logs are attached to this section.

Safety meetings will held at the start of the project and any time a change in procedures of type of materials being removed is changed.

All logs will be turned in weekly.

DATE _____

Is Abatement Underway?

No

Yes

Type of Removal Performed Today: _____

1. Pre-existing conditions: _____
2. Is HVAC System de-activated? _____
3. Is Electrical locked out? _____
4. Are respirators in use during set-up? _____ Type? _____
5. Is protective clothing in use? _____
6. Was area pre-cleaned? _____
7. Are critical barriers established? _____
8. Are Items in work area covered/sealed in 6 mil poly? _____
9. Describe surfaces not covered with poly: _____
10. Is decon set-up? _____
11. Is decon equipped with clean-shower-equip. room? _____
12. Number of air filtration units on site: _____
13. Number of negative air units needed: _____
 $\text{Length} \times \text{width} \times \text{height} = \text{_____} / 22,500 =$
 Number of negative air units needed: _____
14. Are all penetrations sealed? _____
15. Are workers wearing: Hard Hats: _____
 Safety Boots: _____
 Safety Glasses: _____
16. Is poster board set-up displaying all required posters? _____

1. Is negative pressure sustained? _____
2. Methods used to identify negative air pressure and proper air flow: _____
3. Critical barriers and containment area checked to insure integrity? _____ Note Repairs _____
4. Are wet methods being used? _____
5. Are HEPA vacuums being used? _____
6. Is removed waste being promptly contained? _____
7. Are containers with name and location of project? _____
8. Type of respirators used: _____
9. Are all workers wearing: Hard Hats _____
Safety Boots _____
Safety Glasses _____
10. Type of protective clothing used: _____
11. Were the disposable suits examined for rips and mended or changed? _____
12. Are employees using proper decontamination procedures? _____
13. Is the entrance to decon controlled? _____
14. Are any workers observed smoking, eating, drinking, applying cosmetics or removing their respirators while in containment? _____
If so; who? _____
15. Was work area cleaned up today? _____

List visitors name - company - reason for visit

(answer 16-24 only if disposal was performed today)

- 16 Disposal method: _____
17. Was load-out decon used? _____
18. Was waste contained? _____
19. Were containers labeled? _____
20. Was all information on label? _____
21. Total amount of disposal: _____
22. Disposal manifest filled out? _____ Manifest No. _____
23. Was copy of manifest given to Office? _____
24. Number of pictures taken today? _____
25. Was unknown materials discovered today? _____
26. Was abatement completed today? _____
27. Was a final inspection performed? _____

DAY OF WEEK _____

WORK PERFORMED TODAY: (describe removal procedures, amounts of area contained, type of removal, etc.)

[illegible]

Problems or Change Order Work Encountered Today:

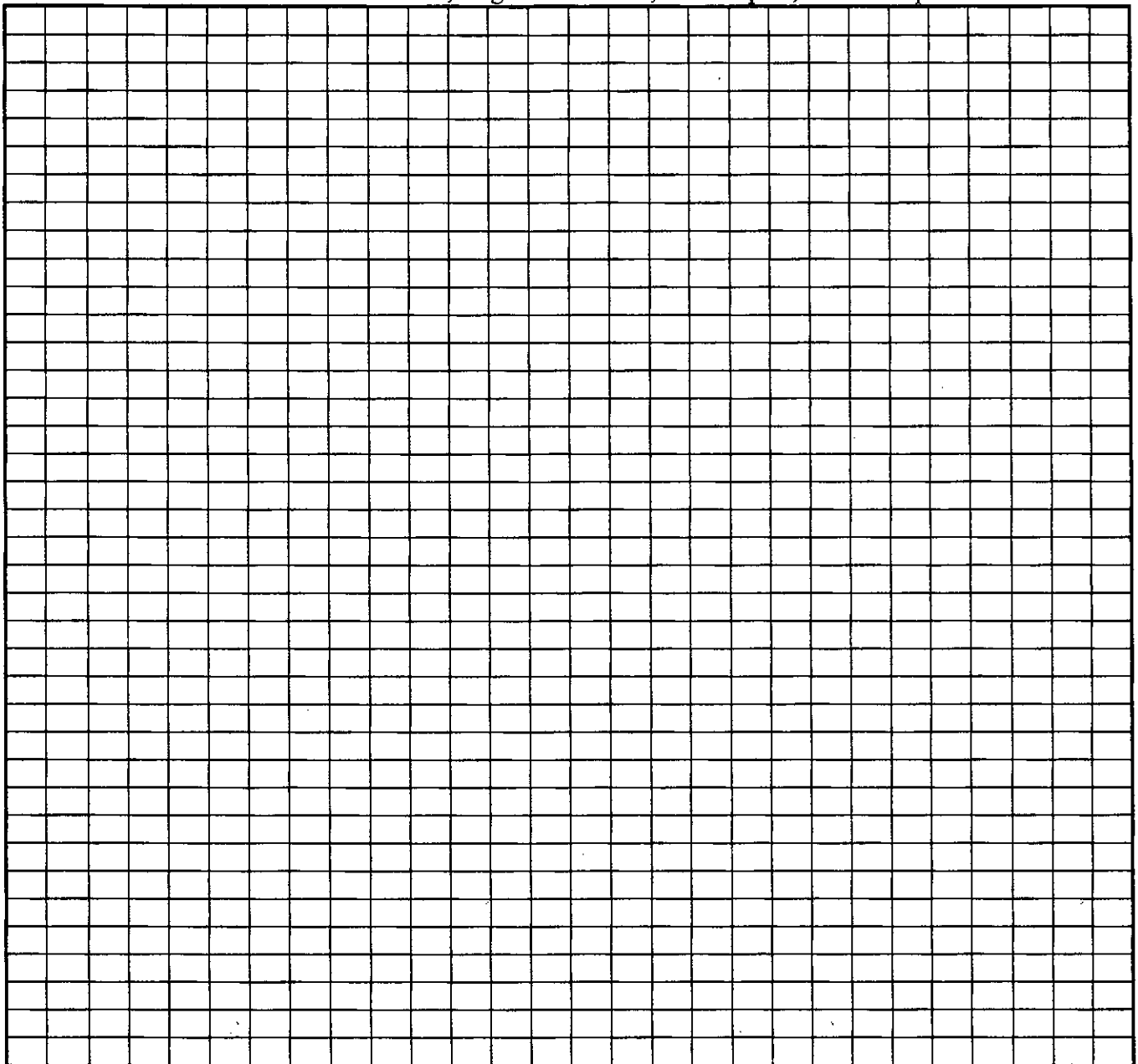
Visits & Conversations

(Quote conversation as accurately as possible, list persons name and time of conversations)

[illegible]

DIAGRAM OF WORK AREA

Include location of Decon, Negative air units, Air samples, Other samples



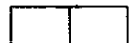
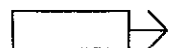
LEGEND

BE - Baseline Environmental Sample
 BA - Baseline Work Area Sample
 AM - Area Monitoring Sample (inside)
 EM - Environmental Sample (outside)
 CM - Clearance Monitoring Site
 PM - Personal Sample
 EX - Excursion Sample

Decon Unit
 Negative Air Machine

Load Out Station

Air Sample Location



S

Name of Employee	Work Location	Work Performed	Start/Stop
Comments: _____ _____ _____		_____ Foreman Signature _____ Date	

SUPERVISOR'S DAILY CHECK LIST

DAILY PRE-SHIFT CHECKS		YES	NO	COMMENTS
1.	All personal & company vehicles in assigned parking areas.	<input type="checkbox"/>	<input type="checkbox"/>	
2.	All deliveries, equipment, supplies and personal tools stored in assigned storage areas.	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Emergency procedures, directions and phone numbers posted and reviewed.	<input type="checkbox"/>	<input type="checkbox"/>	
4.	First aid kits posted and reviewed.	<input type="checkbox"/>	<input type="checkbox"/>	
5.	Safety meeting held - at least weekly.	<input type="checkbox"/>	<input type="checkbox"/>	
OUTSIDE CONTAINMENT AREA				
1.	All warning signs posted, work area barriers and isolation tape in place.	<input type="checkbox"/>	<input type="checkbox"/>	
2.	All power locked out.	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Shut off all HVAC systems serving area.	<input type="checkbox"/>	<input type="checkbox"/>	
4.	Other trades aware of work schedule for day.	<input type="checkbox"/>	<input type="checkbox"/>	
WORK AREA ISOLATION				
1.	Work area isolated?	<input type="checkbox"/>	<input type="checkbox"/>	
2.	All openings sealed?	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Warning signs at all entrances?	<input type="checkbox"/>	<input type="checkbox"/>	
4.	Employees working in the entrances?	<input type="checkbox"/>	<input type="checkbox"/>	
5.	Name of procedure used.			
PERSONAL PROTECTIVE EQUIPMENT				
1.	NIOSH approved respirators?	<input type="checkbox"/>	<input type="checkbox"/>	
2.	Disposable coveralls?	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Head covering?	<input type="checkbox"/>	<input type="checkbox"/>	
4.	Foot/shoe covering?	<input type="checkbox"/>	<input type="checkbox"/>	

WORK PRACTICES

1.	Are wet methods being used?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	Are HEPA filtered vacuums being used?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	Was the waste place in containers while wet?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	Are proper containers being used?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	Are waste all wastes placed in containers?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.	Are containers properly labeled?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7.	Was anyone eating, drinking, smoking, chewing gum/tobacco or using cosmetics in work area?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8.	Were all surfaces adjacent to work area encapsulated?	<input type="checkbox"/>	<input type="checkbox"/>	_____

AIR MONITORING

1.	Were workers monitored?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	Were excursion samples taken?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	Was monitoring done inside the work area?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	Was monitoring done outside the work area?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	Were any samples of other hazardous materials taken?	<input type="checkbox"/>	<input type="checkbox"/>	_____

CLEAN-UP

1.	Was all waste picked up?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.	Were respirators worn until decontamination was completed?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3.	Were all containers removed from the work area and sealed?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.	Was all poly removed from the area?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5.	Were employees notified that the job was completed?	<input type="checkbox"/>	<input type="checkbox"/>	_____

DECONTAMINATION ROOM

1.	Were proper exits used?	<input type="checkbox"/>		<input type="checkbox"/>	_____
2.	Were respirators worn until decontamination was complete?	<input type="checkbox"/>		<input type="checkbox"/>	_____
3.	Were Respirators properly cleaned and dried?	<input type="checkbox"/>		<input type="checkbox"/>	_____
4.	Were PAPR Units re-charged?	<input type="checkbox"/>		<input type="checkbox"/>	_____
5.	Were tools properly cleaned?	<input type="checkbox"/>		<input type="checkbox"/>	_____
6.	Did all employees shower?	<input type="checkbox"/>		<input type="checkbox"/>	_____
7.	Was all equipment properly cleaned and stored?	<input type="checkbox"/>		<input type="checkbox"/>	_____
8.	Was the decontamination room left in a clean and orderly condition?	<input type="checkbox"/>		<input type="checkbox"/>	_____

DISPOSAL

1.	Was all waste taken to the proper storage area?	<input type="checkbox"/>		<input type="checkbox"/>	_____
2.	Was the area secured after the material was stored?	<input type="checkbox"/>		<input type="checkbox"/>	_____
3.	Square Feet of Materials Removed				
4.	Cubic feet of Debris Picked Up				

JOB SITE SAFETY MEETING

PROJECT: _____

DATE: _____

PROJECT FOREMAN: _____

DISCUSS PERSONNEL SAFETY EQUIPMENT

	HARD HATS		SAFETY HARNESS
	SAFETY GLASSES & GOGGLES		HEARING PROTECTION
	PROTECTIVE CLOTHING		
	GLOVES – TYPE AND PURPOSE		
	SHOES – TYPE AND PURPOSE		
	RESPIRATORS (FIT & FILTER)		

DISCUSS SPECIFIC JOB SITE SAFETY ITEMS

	JOB PROCEDURES AND WORK PLAN
	MATERIALS TO BE REMOVED
	JOB SITE HAZARD ANALYSIS
	EMPLOYEE PARKING
	TRAFFIC HAZARDS AROUND JOB SITE
	EMERGENCY PROCEDURES
	MEETING PLACE IN CASE OF EMERGENCY
	EMERGENCY PHONE NUMBERS
	SITE EVACUATION PLAN
	HEAT RELATED DISORDERS
	COLD RELATED DISORDERS
	CARBON MONOXIDE POISONING
	CHEMICALS USED ON JOB SITE
	LOCATION OF MSDS INFORMATION
	LOCATION OF FIRST AID KITS
	LOCATION OF GENERAL CONTRACTOR'S OFFICE
	INSPECT ALL EQUIPMENT FOR SAFETY HAZARDS
	SIGNS AND BARRIERS IN PLACE?
	OCCUPIED BUILDING PROCEDURES

JOB SITE HAZARDS DURING JOB WALK

	EMERGENCY EXITS
	FIRE HAZARDS
	ELECTRICAL HAZARDS
	TRIP HAZARDS
	OVERHEAD HAZARDS
	LADDERS
	SCAFFOLDING
	HOT PIPES
	PIPES WITH LIQUIDS OR STEAM ACTIVE
	CHEMICALS STORED BY OWNER AT JOB SITE

Adaptic Spray
glue

IDENTITY AND MANUFACTURER'S INFORMATION

<p align="center">IDENTITY AND MANUFACTURER'S INFORMATION</p> <p> NFPA Rating: Health-2; Flammability-4; Reactivity-0; Special-0 HMIS Rating: Health-2; Flammability-4; Reactivity-0; Personal Protection-8 Manufacturer's Name: Amrep, Inc. DOT Hazard Classification: ORM-D Address: 990 Industrial Park Dr. Identity (trade name as used on label): Address: Marietta, GA 30062 MISTY WEBBING ADHESIVE SPRAY VF Date Prepared: 07/29/96 Prepared By: DLK/D MSDS Number: 309 Revision: 1 Information Calls: (770)472-2071 NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA Emergency Response Number: 1(800)255-3924 </p>																																																																																									
<p align="center">SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION</p> <table border="1"> <thead> <tr> <th>COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)</th> <th>CAS Number</th> <th>SAFHA III LIST</th> <th>OSHA PEL (ppm)</th> <th>ACGIH TLV (ppm)</th> <th>Carcinogen Ref. Source **</th> </tr> </thead> <tbody> <tr> <td>ACETONE</td> <td>67-64-1</td> <td>No</td> <td>1000</td> <td>750</td> <td>d</td> </tr> <tr> <td>HEXANE</td> <td>110-54-3</td> <td>Yes</td> <td>50</td> <td>50</td> <td>d</td> </tr> <tr> <td>ISOBUTANE / PROPANE BLEND</td> <td>75-28-5</td> <td>No</td> <td>800</td> <td>800</td> <td>d</td> </tr> <tr> <td></td> <td>74-98-6</td> <td>No</td> <td>1000</td> <td>1000</td> <td>d</td> </tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>						COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SAFHA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **	ACETONE	67-64-1	No	1000	750	d	HEXANE	110-54-3	Yes	50	50	d	ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d		74-98-6	No	1000	1000	d																																																						
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<p align="center">SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS</p> <p> Boiling Point: N/A Specific Gravity (H₂O=1): Concentrate Only = 0.853 Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 80 Vapor Pressure (Non-Aerosols) (mm Hg and Temperature): N/A Vapor Density (Air = 1): N/E Evaporation Rate (= 1): N/E Solubility in Water: Partial Water Reactive: No Appearance and Odor: Straw colored liquid with ketone solvent odor. </p>																																																																																									
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<p align="center">SECTION 4 - REACTIVITY HAZARD DATA</p> <p> STABILITY: <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE HAZARDOUS POLYMERIZATION: <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR Incompatibility (Met to avoid): Strong oxidizing agents. Conditions to Avoid: Open flame, welding arcs, heat, sparks. Hazardous Decomposition Products: Carbon dioxide, carbon monoxide. </p>																																																																																									
<p align="center">SECTION 5 - HEALTH HAZARD DATA</p> <p> PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input checked="" type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS ACUTE EFFECTS: Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation. Eye Contact: Irritation. Skin Contact: Irritation due to defatting of skin. Ingestion: Possible chemical pneumonia if aspirated into lungs. </p> <p> CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of hexane may cause nerve damage. Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions. </p>																																																																																									
<p align="center">EMERGENCY FIRST AID PROCEDURES</p> <p> Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention. Skin Contact: Wash with soap and water. If irritated, seek medical attention. Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention. Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention. </p>																																																																																									
<p align="center">SECTION 6 - CONTROL AND PROTECTIVE MEASURES</p> <p> Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH in positive pressure mode. Protective Gloves: Neoprene. Eye Protection: Safety glasses recommended. Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV. Other Protective Clothing & Equipment: None Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing. </p>																																																																																									
<p align="center">SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE</p> <p> Steps To Be Taken if Material is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. (DO NOT FLUSH TO SEWER) Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard. Precautions To Be Taken in Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F. Other Precautions: Avoid food contamination. Avoid breathing vapors. Remove ignition sources. </p>																																																																																									

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

Post-it Fax Note	7671	Date	# of PAGES ▶
To John		From James	
Co. Mepr		Co. Abertix	
Phone #		Phone #	
Fax # 907 452 1638		Fax #	

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special-0 Manufacturer's Name: AMREP, INC. Address: 990 Industrial Park Drive Marietta, GA 30062		HMS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B DOT Hazard Classification: ORM-D Identity (trade name as used on label): MISTY HEAVY DUTY ADHESIVE SPRAY	
Date Prepared: 2/2/00 Prepared By: ES/KDVB		MSDS Number: 315 Revision: 0	
Information Call: (770)422-2071 EMERGENCY RESPONSE NUMBER: 1(800)255-3824		NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA	

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA (H) LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ACETONE	67-64-1	No	1000	750	d
HEXANE	110-54-3	Yes	500	50	d
ISOBUTANE / PROPANE BLEND	75-28-6	No	800	800	d
	74-98-8	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H₂O=1): Concentrate Only = 0.853
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.80	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (= 1): N/E
Solubility in Water: Partial	Water Reactivity: No
Appearance and Odor: Straw colored liquid with ketone solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % In Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus. Use water fog to cool containers to prevent rupturing & exploding containers. Provide shielding for personnel.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input checked="" type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.	
Eye Contact: Irritation.	
Ingestion: Possible chemical pneumonia if aspirated into lungs.	
SKIN CONTACT: Irritation due to defatting of skin.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of hexane may cause nerve damage.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	
EMERGENCY FIRST AID PROCEDURES	
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.	
Skin Contact: Wash with soap and water. If irritated, seek medical attention.	
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.	
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH in positive pressure mode.	Eye Protection: Safety glasses recommended.
Protective Gloves: Nitrone.	
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerial cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions (A/R Special Hazards): KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.
** Chemical Listed as Carcinogen or Potential Carcinogen. (a) NTP (b) IARC Monograph (c) OSHA (d) Not Listed (e) Animal Data Only

MATERIAL SAFETY DATA SHEET

POLY-AMERICA, INC.
2000 W. Marshall Dr.
Grand Prairie, Texas 75051

Emergency Phone: 214/647-4374

Issued: September 1990

I. IDENTIFICATION

Product: Polyethylene Flame Retardant Sheeting
Chemical Family: Polyolefin
Formula: $\text{CH}_3-(\text{CH}_2)_n-\text{CH}_3$

II. INGREDIENTS

This product may contain one or more of the following: Polyethylene homopolymer or polyethylene copolymer.

Hazardous components: Antimony Trioxide Cas. No. -1309-64-4
ACGIH TLV - .2mg/M³
OSHA PEL - .03mg/M³

III. PHYSICAL PROPERTIES

Boiling Point: Not applicable
Vapor Pressure: Not applicable
Solubility in Water: Negligible
Density: .900-.960 gm/cc
Form: Thin solid film or sheet
Odor: None
Volatiles: Nil

IV. FIRE AND EXPLOSION HAZARD DATA

Autoignition Temperature: 500-650 degrees F.
Flash Point: Not Applicable
Flammable Limits: Not applicable
Fire Fighting: Use water to extinguish the fire and cool surfaces. Other types of extinguishers may also be used. Use NIOSH approved self-contained breathing apparatus when fighting fires
Hazards: Static discharges can be generated. Excessive airborne dust may cause explosion
Decomposition Products: CO₂; H₂; Antimony Compounds; Bromine compounds; and under lean oxygen conditions CO

V. REACTIVITY

Stability: Stable
Conditions to Avoid: Temperatures over 300 degrees C. can cause degradation.
Reactive Polymerization: Does not occur
Incompatibility: Avoid strong oxidizing agents

VI. HEALTH

Acute & Chronic Hazards:	Ingredients used are considered to be a hazardous chemical under OSHA hazard communication std. 29 CFR 1910.1200; however will not present any health hazard under normal use at ambient conditions
Eye:	Solid or dust may cause irritation or corneal injury due to mechanical action.
Skin Contact:	Negligible hazard under normal use
Inhalation:	Negligible hazard at ambient temperatures under normal use
Ingestion:	None currently known
Exposure Limits:	No limit established for polyethylene
First Aid:	If ingested, no known health effect. Skin contact with molten plastic should be treated with cold water before plastic is removed, then wrap in clean gauze and seek medical attention

VII. EMPLOYEE PROTECTION

Control Measures:	None
Respiratory Protection:	None
Protective Clothing:	None

VIII. ENVIRONMENTAL PROTECTION (SPILLS AND LEAKS)

Polyethylene flame retardant sheeting is considered non-hazardous, however it degrades very slowly and may become a nuisance. Recycle old or unused plastic when possible. Otherwise, dispose in landfills or incinerators in accordance with local, state, and federal regulations.

IX. TRANSPORTATION INFORMATION

Not regulated

X. ADDITIONAL INFORMATION

Regulatory Requirements: Sara/Title III

This product contains a toxic chemical for routine annual "Toxic Chemical Release Reporting" under section 313 of the Emergency Planning & Community Right to Know Act of 1986 & of 40 CFR 372

Chemical: Antimony compounds % by weight: < 2%

DOT:	Not applicable
HMIS: Health:	0
Reactivity:	0
Flammability:	1

Although the above information is believed to be accurate and reliable, no warranty is expressed or implied. It is the customer's responsibility to determine the usefulness and applicability of this material for the intended use.

VI. HEALTH

Acute & Chronic Hazards: Ingredients used are considered to be a hazardous chemical under OSHA hazard communication std. 29 CFR 1910.1200; however will not present any health hazard under normal use at ambient conditions

Eye: Solid or dust may cause irritation or corneal injury due to mechanical action.

Skin Contact: Negligible hazard under normal use

Inhalation: Negligible hazard at ambient temperatures under normal use

Ingestion: None currently known

Exposure Limits: No limit established for polyethylene

First Aid: If ingested, no known health effect. Skin contact with molten plastic should be treated with cold water before plastic is removed, then wrap in clean gauze and seek medical attention

VII. EMPLOYEE PROTECTION

Control Measures: None

Respiratory Protection: None

Protective Clothing: None

VIII. ENVIRONMENTAL PROTECTION (SPILLS AND LEAKS)

Polyethylene flame retardant sheeting is considered non-hazardous, however it degrades very slowly and may become a nuisance. Recycle old or unused plastic when possible. Otherwise, dispose in landfills or incinerators in accordance with local, state, and federal regulations.

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Not regulated

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Health:	0
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Multi-Purpose Remover

Product Description

BTN I

BTN B*F*S* II

BTN III HD

**DOUBLE DUTY
VII**

BTN VIII

BTN IX

Strip-Tox

**Ready-Strip
Wash**

**Back to Lead
Paint Removal**



TYPES OF PAINT REMOVED: Back To Nature VIII can remove most varieties of paints & varnishes which are oil or water-based including, latex, stains, lead-based paints, and polyurethanes. Unlike other paint removers, it can remove more difficult coatings such as two-part epoxy, most baked on enamels, urethanes and marine anti-fouling paints.

SURFACES: BTN VIII works on a multitude of surfaces including wood (will not discolor or raise grain), metal, brick, plaster, masonry, stone, concrete, and fiberglass (will not damage the gel coat on boats), etc. The paste will not damage any substrate it is applied to. BTN VIII is not to be used on sheetrock, plastic, rubber or linoleum surfaces.

INSTRUCTIONS:

A. Preparation - Mask any areas not being stripped with plastic and masking tape.

B. Application

Test Patch - Since it is often hard to know the type or the amount of paint on a surface, small test areas should be stripped to determine the proper application and dwell time needed for paint removal to occur.

1. For stripping 3 to 4 layers of paint quickly - Apply Back To Nature VIII to the surface at a total of approximately 1/64" thick (10 to 15 mils) with a brush, roller, trowel, putty knife or sprayer. Can be sprayed effectively using an airless sprayer Drill mix before spraying - Remove filters from sprayer & spray gun - Submerge pump directly into remover, Do not use suction hose - Use NEW 1/4" or 3/8" airless hose. Use at least a 1 GPM piston sprayer, .019-.021 reversible spray tip; A wet mil gauge should be used to measure thickness. Let the product dwell from 15 minutes to 4 hours. Follow Removal Techniques at Subdiv. C. Coverage for Back To Nature VIII, when used like this, will vary between 100 and 150 sq. ft. per gallon.

2. For removal of multiple layers or stubborn coatings - Two test patches are suggested.

(i) First Test Patch - Apply the stripper approximately 1/32" thick (30

mils) to the surface. The patch then should be checked for dwell time as follows (only a portion at any one time): Check the patch first at 2 - 4 hours, then periodically thereafter. As a rule of thumb, the greater the layers of paint, the longer the product should be left on. The stripper will usually remove 8 - 12 layers of paint in 24 hours. More layers of paint (20+) may take longer (2 - 3+ days). Due to the nature of certain paints such as two part epoxy and urethanes, Back To Nature VIII may need more time to be effective. Average dwell time for these coatings may be 48 to 72 hours.

(ii) Second Test Patch - In some areas, some surface coatings (usually latex) soften easily, causing puffing away from the surface. In these cases, the stripper works differently so the patch should be done as follows:

- a). Apply a light coat of paint stripper (approximately 5 - 10 mils) to the surface. Wait 2 - 6 hours. If the surface starts to pull away, the top layers have lifted from the surface and can be easily removed with a scraper or knocked off the surface with a broom or other device. The paint remover has penetrated through these layers and begins to soften the remaining layers.
- b). While the undercoats are still soft, apply another coat of stripper at approx. 1/32" thick (20-25 mils) to the surface. The patch then should be checked for dwell time as follows (only a portion at any one time): Check the patch first at 2 - 4 hours, then periodically thereafter. As a rule of thumb, the greater the layers of paint, the longer the product should be left on. The stripper will usually remove 8 - 12 layers of paint in 24 hours. More layers of paint (20+) or chemically resistant coatings may take longer (2 - 3+ days).
- c). This procedure usually applies to stripping ceilings as well.

Coverage for BTN VIII when used in this manner (i) and (ii) varies between 50 and 75+ sq. ft. per gal.



3. Back To Nature VIII will easily cling to vertical surfaces. Use your tool to fill detailed surfaces. For best results apply at temperatures between 60 and 80 degrees F. Product activity is reduced below a temperature of 60 degrees F and may require additional dwell time before all layers of paint are removed. If product freezes let thaw and stir vigorously until product is consistent. No Neutralization required. Clean-up with water.

C. Suggested Removal Techniques

1. Plaster Surfaces

(i) Flat Plaster Surfaces - Easiest removal is achieved using a 4" or wider razor blade scraper (commonly known as a wallpaper stripper) to lift the remover/paint off the surface.

(ii) Decorative Plaster (or Wood) - Use a Back To Nature Stainless Steel

Scraper with 5 function detail blade to lift the remover/paint off the surface. Use a stiff bristle brush with Ready-Strip Wash Paint Remover Wash or light amounts of water to remove any residue.

2. Fiberglass Surfaces – Use a putty knife to lift the remover/paint from the surface. Use a stiff bristle brush with Ready-Strip Wash or light amounts of water to remove any residue remaining.

3. Wood

(i) Flat Wood Surfaces - Easiest removal is achieved using a Back To Nature stainless steel scraper to strip remover/paint from the surface. Use a stiff bristle brush with Ready-Strip Wash or light amounts of water to remove any residue remaining.

(ii) Decorative Wood - (*see Decorative Plaster*)

4. Masonry, Concrete Surfaces - Remove bulk of remover/paint with a stiff putty knife or wire brush. Use a wire brush with Ready-Strip Wash or light amounts of water to remove any residue remaining. Residue can also be removed with a high pressure washer where permitted.

5. Metal Surfaces - Agitate or rough up remover/paint on the surface with a wire brush without attempting removal. This helps to lift bottom layers from the surface. Use a 4" or wider razor blade scraper (wallpaper stripper) or stiff putty knife (pipe railings or irregular surfaces should use the putty knife) to lift remover/paint off the surface. Use a wire brush with Ready-Strip Wash or light amounts of water to remove any residue remaining.

6. Note: Misting the applied area with Ready-Strip Wash or water prior to removal makes lifting of the paint or varnish easier. Misting with Ready-Strip Wash or water also reactivates the product if it feels dry to the touch. Any paint residue left on a surface should be removed within a short period of time so that paint residue will not dry up & re-adhere. In some circumstances, it may look like the last layer of paint is still on the surface. This is not a dried layer of paint, but paint & stripper which has been emulsified so that it can be removed.

SAFETY INSTRUCTIONS: Safety goggles are recommended for eye protection. Protective gloves such as butyl rubber, neoprene gloves are also recommended. Maintain adequate ventilation especially in confined areas. If spraying or misting is expected use NIOSH approved chemical cartridge (organic vapor) respiratory equipment (full face respirator recommended). In case of inhalation - remove victim to fresh air and provide oxygen if breathing is difficult. In case of eye contact - flush exposed areas with large quantities of water. In case of skin contact - wash skin with soap and water. Use emollient skin creams. In case of ingestion - do not induce vomiting. Call physician immediately.

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Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List)
BACK TO NATURE VIII

Note: Blank spaces are not permitted. If any item is not applicable, or no
information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name DYNACRAFT INDUSTRIES INC.	Emergency Telephone Number (908) 303 - 6333
Address (Number, Street, City, State, and ZIP Code) 17 SWEETMANS LANE	Telephone Number for Information (908) 303 - 6333
MANALAPAN, NEW JERSEY 07726	Date Prepared 3/1/96
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
N. Methyl-2 Pyrrolidone (872-50-4)	Not Established			30-60%
Dimethyl Glutarate (1119-40-0)	Not Established			30-60%
Dimethyl Adipate (627-93-0)	Not Established			10-20%
Non Toxic/Non Hazardous Components	N/A			5-10%

Section III — Physical/Chemical Characteristics

Boiling Point 205°C	Specific Gravity (H ₂ O = 1) 1.1
Vapor Pressure (mm Hg.) .2 mm Hg. at 20°C (68°F)	Melting Point N/A
Vapor Density (AIR = 1) 5.5-6	Evaporation Rate (Butyl Acetate = 1) .06
Solubility in Water 55-65%	
Appearance and Odor Mild odor	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) Over 200° F	Flammable Limits	LEL 1.1	UEL 8.5
Extinguishing Media Water fog, spray, dry chemical CO₂			
Special Fire Fighting Procedures Do not enter confined fire space without protective equipment including a NIOSH approved			
S. Use water spray to cool fire exposed surfaces and to protect personnel.			
Unusual Fire and Explosion Hazards Low when exposed to flames. May react with strong oxidizing materials.			

NA = Not Applicable

(Reproduce locally)

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid	Strong oxidizing agents, fire, flame
	Stable	X		

Incompatibility (Materials to Avoid) Strong oxidizing agents

Hazardous Decomposition or Byproducts Unlikely

Hazardous Polymerization	May Occur		Conditions to Avoid	N/A
	Will Not Occur	X		

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Moderately hazardous, not established Skin? 4,000-6,000 mg/kg Ingestion? 5,000 mg/kg eye
Health Hazards (Acute and Chronic) Mildly to moderately irritating to eyes. Prolonged exposure to skin may cause irritation redness.

Carcinogenicity: NTP? Not listed IARC Monographs? Not listed OSHA Regulated? Not regulated
Signs and Symptoms of Exposure: Very slow evaporation unlikely to reach exposure limits.
Acute Overexposure: Dizziness, drowsiness unlikely due to very slow evaporation. Ila, cause temporary blurring of vision.
Chronic Overexposure: Upper respiratory track irritation, lightheadedness.

Medical Conditions Generally Aggravated by Exposure None established

Emergency and First Aid Procedures: Inhalation-remove victim to fresh air and provide oxygen if breathing is difficult. Eyes-flush exposed areas with large quantities of water. Skin-wash skin with soap & water. Use emollient skin creams. Ingestion-do not induce vomiting. Call Physician.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled Soak up with suitable, non reactive absorbant material, collect in suitable containers for disposal. Remove any source of high heat, sparks, flame. Recovered free liquid may be re-used or reclaimed.

Waste Disposal Method Dispose of in accordance with all Local, State and Federal regulations.

Precautions to Be Taken in Handling and Storing Store at room temperatures between 40°F - 110°F, keep container tightly closed

Do not mix with strong oxidants, acids or alkalis.

Other Precautions Do not reuse empty containers for other liquids.

Section VIII — Control Measures

Respiratory Protection (Specify Type) Use NIOSH approved chemical cartridge (organic vapor) respiratory equipment when spraying material (full face respirator is recommended)

Ventilation	Local Exhaust Sufficient to maintain air concentration as required by OSHA	Special	N/A
	Mechanical (General) Maintain adequate ventilation	Other	N/A

Protective Gloves nitrile rubber, Neoprene gloves recommended Eye Protection Eye protection for application and removal such as chemical goggles.

Other Protective Clothing or Equipment Impervious coveralls, apron, boots, as necessary to prevent skin contact.

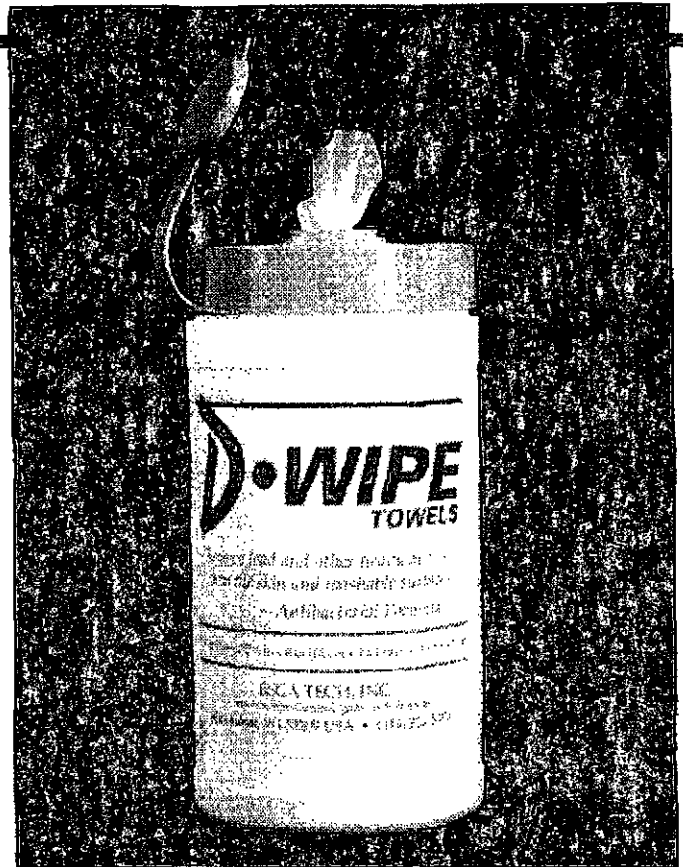
Eye wash as needed.

D•WIPE[®] TOWELS

*— Remove lead and
other heavy metals
from the skin
and washable surfaces*

D-Wipe[®] Towels were specially developed for immediate clean up of metal contamination without available water. Soft towels are saturated with a unique antibacterial, moisturizing cleaning formula. They clean a wide variety of metal powders from surfaces. D-Wipe[®] Towels remove the widest possible range of hazardous metals.

D-Wipe[®] Towels safely remove metal contaminants with gentle cleaning agents and deflocculants. Since the metals are not dissolved, risk of migration through the skin is minimized.



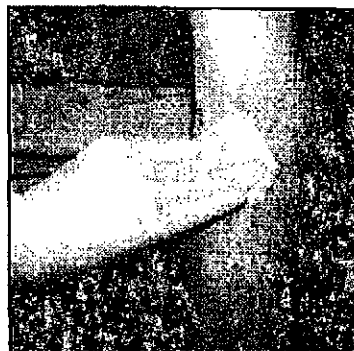
*Convenient D-Wipe[®] Towels pop up one by one.
The rest stay in the container, clean and sterile.
Inexpensive, portable and disposable.*

Clean Hands, Face and Exposed Skin



*Gentle action cleans,
removes metals and
protects the skin*

Blood Samples



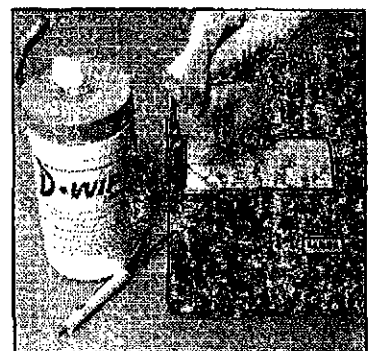
*Clean the skin and
remove contaminants
before drawing blood*

Clean Respirators



*Fast, efficient, quick
drying, antibacterial
cleaning of facepieces*

Clean Tools and Instruments



*Alcohol based cleaning
solution cleans tools
safely and quickly*

Skin Care:

D-Wipe[®] Towels are the most efficient waterless hand cleaning method available. Quickly remove metal contaminants from the skin and other wipeable surfaces. Special alcohol based cleaning formula with Aloe Vera Gel conditions the skin while reducing bacteria levels.

Material Safety Data Sheet

Issue Date: October 6, 1997 Revisions: Rev 1: 01/28/98; Rev 2: 03/25/01; Rev 3: 01/30/03

Page 1 of 2

Product Name: D-Wipe® Towels

Product Code #: WT -001; WT -040; WT -220; WT-221

Product Information: (414) 962-5323

Manufacturer: ESCA Tech, Inc.
3747 North Booth Street
Milwaukee, WI 53212

Transportation Emergency Phone:
(414) 962-5323
(Monday - Friday Daytime)

Fax: (414) 962-7003 email: eti@execpc.com

Section 1: Material Identification

Chemical Name:	Proprietary Mixture	
Proper Shipping Name:	(49 CFR 172.101) Cleaning Compound, N.O.S.	
DOT Hazard Name:	(49 CFR 172.101) None	
DOT ID No.:	None	
D.O.T. Hazard Class:	None	
RCRA Hazard Class:	(40 CFR 261) (As Received): None	
E. P.A. Priority Pollutants:	(40 CFR 401.15): None	
NFPA:	Combustible Liquid	
CAS No.:	Mixture	
Generic Description:	Cleaning Towels	
OSHA Subpart Z: No	OSHA 1910.1200: Yes	
SARA Title III, Sec.313: No	TPQ: No	Reportable Quantity: None
State Lists: None	Proposition 65: No	Reproductive Hazard: No
Carcinogen: No	WHMIS (Canada): No	
Extremely Hazardous Substances List:	No	

Section 2: Ingredients and Hazards

Hazardous Ingredients as Identified by OSHA 1910.1200: 5-20 % SD Alcohol 40, CAS No.64-17-5 OSHA PEL: 1000 ppm ACGIH TLV: 1000 ppm Other Recommended Limits: None Contains: Antibacterial cleaning solution mixture. Antibacterial ingredient: 0.45 % Benzalkonium Chloride CAS# 68424-85-1. All ingredients are listed on EPA TSCA Inventory of Chemical Substances.

Section 3: Physical Data

Boiling Point:	N/A
Flash Point:	104° F
Vapor Density (Air = 1):	N/A
Specific Gravity (H2O = 1):	0.98
Evaporation Rate (Butyl Acetate = 1):	N/A
Solubility in Water:	Complete
Appearance and Odor:	White applicator towel saturated with clear liquid with alcohol odor
pH:	5-6

Section 4: Fire and Explosion Hazard Data

Flash Point (method used): 104° F Tag closed cup LEL N/A UEL N/A Extinguishing Media: Carbon Dioxide or Alcohol type foam Special Fire Procedures: Treat as combustible, self-extinguishing material Unusual fire and explosion hazards: None

Section 5: Reactivity Data

Stable/Unstable: Stable Conditions to Avoid: None known. Hazardous Decomposition/Byproducts: None known
Hazardous Polymerization: Will not occur Incompatibility: None known.

Section 6: Health Hazard Data

Routes of entry:	Ingestion or Inhalation: not normal route of entry. Skin hazard: none known. Eye contact: may cause stinging.
Acute/Chronic Health Effects:	None - under normal usage.
Carcinogenicity:	None known. NTP? No IARC Monographs? No OSHA Regulated? No
Signs/Symptoms of Exposure:	SKIN: Excessive skin exposure: none when used in accordance with label directions. If skin rash or irritation occurs, discontinue use. EYES: May cause stinging. INHALATION: Not normal route of entry. ORAL: Not normal route of entry.
Emergency and First Aid:	SKIN: if rash or irritation occurs, discontinue use and use hand cream. EYES: Flush with water for 15 minutes, lifting lids. If irritation persists, contact physician. INHALATION: Move to fresh air. ORAL: Consult physician.
Medical Conditions Generally Aggravated by Exposure:	None known.

Section 7: Spill, Leak, and Disposal Procedures

Pick up with absorbent media and treat as combustible waste until dry Waste-Disposal Method: According to all local, state and federal regulations.

Section 8: Special Protection Information

Respiratory Protection: None required. Ventilation: Normal Protective Gloves: Not required Eye Protection: Use if splashing is anticipated. Other Protective Clothing or Equipment: Not needed Work/Hygienic Practices: Follow good housekeeping practices.

Section 9: Special Precautions and Comments

Handling and storage requirement: **Keep canister tightly closed when not in use.** Store away from heat and ignition sources. Store at temperatures between 40° and 90° F, out of direct sunlight. **Keep out of reach of children.** A filter use may contain suspended heavy metals. Dispose in accordance with all applicable local, state and federal waste regulations.

ESCA Tech, Inc Disclaimer "The information and recommendations presented herein are based on sources believed to be reliable as of the date hereof. ESCA Tech makes no representation as to the completeness or accuracy thereof. It is the user's responsibility to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. No representations or warranties not expressly set forth herein are made hereunder, whether express or implied by operation of law or otherwise, including, but not limited to any implied warranties of MERCHANTABILITY OR FITNESS. ESCA Tech neither assumes nor authorizes any other person to assume for it, any other or ADDITIONAL LIABILITY OR RESPONSIBILITY resulting from the use of, or reliance upon, this information."

Shrouded Pneu

Needle Scalers

(Dustless Needle Guns)



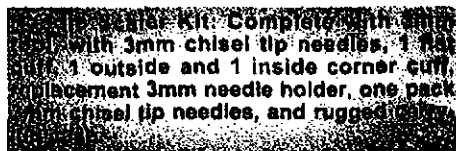
These multi-purpose tools can be used for removing thick mill scale or contaminated coatings from hard-to-reach areas like corners and deep cavities. Scalers generate virtually zero dust when the substrate is steel, hard metals, etc. Miniscule particles can be easily vacuumed away with appropriate vacuums.

Features

- Lightweight
- Adjustable front nose piece with inter changeable clear "cuffs"
- Chisel tip needles
- Smaller diameter 2mm needles for achieving SSPC-SP-11
- Ergonomic pistol grip design

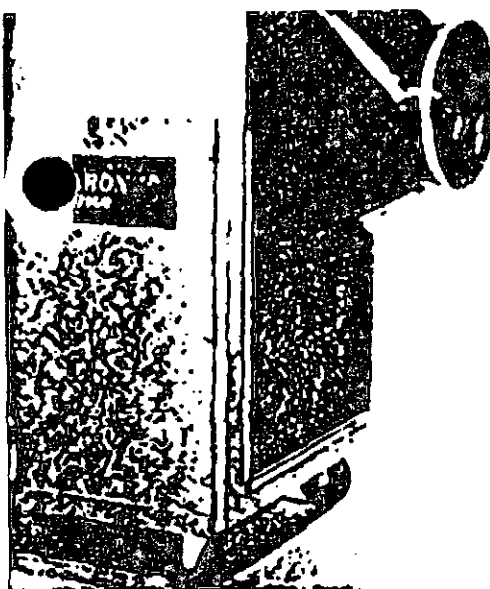
Applications

- Spot removal of lead-based paints from structural steel
- Removal of lead-based paints from door frames and stair risers
- Removing old coatings plus controlling dust on concrete floors or block walls

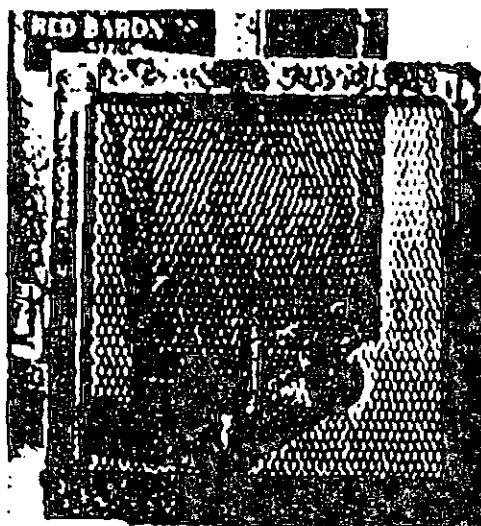


Item 58300 Needle Scaler Kit (3B Pistol Grip).....\$1,200.00

Item 58338 Needle Scaler Kit (2B Pistol Grip).....1,000.00



EXCLUSIVE INTAKE FUNNEL (optional)
provides maximum filter airflow.



REMOVABLE INTAKE FILTER DOOR
with slip hinges for fast filter changes



EXCLUSIVE TAPING MANIFOLD (optic)
permits taping to unit outside work area

RED BARON ST2000 MEETS LARGE AIR CLEANING NEEDS

REMOVES DANGEROUS INDUSTRIAL DUST - FUMES - AND GASES

Formaldehyde - Ammonia - Solvents - and Chlorinated Hydrocarbons. Specific information on special filter applications available.

SOLVES A VARIETY OF AIR POLLUTION PROBLEMS IN LARGE AREAS

Warehouses - Gymnasiums - Auditoriums - Banquet Halls - Garages and Manufacturing Facilities.

RED BARON ST900 AIRMOP RECOMMENDED FOR SMALLER AREAS

Contact your Red Baron Dealer or Global Consumer Services for information.

RED BARON ST2000 IS EQUIPPED WITH

ALL UL APPROVED COMPONENTS

GREEN - A-OKAY LIGHT

YELLOW - EARLY WARNING LIGHT

RED - EXCESSIVE BLOCKAGE LIGHT

AUDIBLE ALARM WITH RED LIGHT

MINIHELIC W.C. GAGE

ELAPSED TIME METER

FOUR-SPEED SWITCH

SLIP-ON CASTERS

CONTROL PANEL FUSE

TIMED AUTOMATIC SHUT OFF

ENCLOSED CONTROL PANEL WIRING

HANDLES FOR LIFTING LEVERAGE

SLIP HINGED REMOVABLE INTAKE DOOR

THERMAL PROTECTED BLOWER

RED BARON MODEL ST2000 SPECIFICATIONS

MOTOR - Direct drive, high pressure dynamically balanced wheel.

MOTOR - 4-Speed, 3/4 HP, 60 HZ, 115V, 11.5 amps, Thermal Protection Auto-Reset.

CONTROLS - 12 Hour Timer, 4-Speed Switch, Elapsed Time Indicator, Pressure Warning W.C. Gage/Lights/Audible Alarm.

DIMENSIONS - Length 36" - Width 28" - Height 29" (Add 6" - Casters).

FILTERS - 4 Stages. 1st, 2nd, 3rd, 4th HEPROTECTOR, 99.97% or 99.99%

HEPA at 0.3 Microns

WEIGHT - 279 LBS (Filters Loaded).

AIR DELIVERY (FILTER LOADED)

Speed	0.9" SP	1.3" SP
1st	2300 CFM	1800 CFM
2nd	2000 CFM	1600 CFM
3rd	1800 CFM	1300 CFM
4th	1650 CFM	800 CFM



EnviroTech Supply, Ltd.

• Fairbanks, Alaska 99701 • (907) 456-5930

J. J. Middleton
PRESIDENT




GLOBAL CONSUMER SERVICES, INC.

1721 N. Highland Avenue, Los Angeles, CA 90028 (213) 462-6980
14806 S. Orexel Avenue, Dolton, IL 60419 (312) 841-4240

TO WHOM IT MAY CONCERN:

The Red Baron Air Filtration units have been tested and certified to:

- (1) Environments using negative air pressure.
- (2) Environments requiring the capture of micronic asbestos fibers.
- (3) Work areas where cooling and ventilation is needed or environments of general air purification of ambient air is required. The HEPA's used in the Red Baron have been tested and certified. In addition the filters are rated at not less than 99.97% atmospheric dust as tested on (ASHRAE) American Society of Heating, Refrigeration & Air Conditioning Engineers standard 52 thru 76. All Red Baron units are shipped with a 99.97% HEPA filter. HEPA filters rated at 99.99% are available at the request of the customers. The filters comply with Federal Standard 209B for Class 100 air. The Red Baron Air Cleaners are built in compliance with EPA Report Number 1560-5-83-002 dated March 1983 section F. This section outlines the recommended requirements in operating negative air equipment in use with asbestos removal.
- (4) Meets all requirements under standards set by (ANSI) American National Standards Institute Z9.2.
- (5) All electrical components are UL listed.


LANCE CONRAD,
CUSTOMER SERVICE

PROTECTIVE CLOTHING OF TYVEK®

SPUNBONDED OLEFIN

Type 14
TYVEK®
A Superior
Barrier
to Asbestos
Fibers



Recognition of the hazards resulting from exposure to asbestos fiber has prompted the Environmental Protection Agency, OSHA and other agencies to enact regulations for its safe handling to protect the public, the environment and the worker.

The durability, flexibility and strength characteristics of asbestos make it well suited for an estimated 3000 separate commercial, public and industrial applications. These include roofing and flooring products; fireproofing textiles; friction products; reinforcing material in cement, pipes and coating materials; and thermal and accoustical insulations.

In a recent study, conducted by a major independent research institute, TYVEK® 1422A was evaluated as a barrier to asbestos fibers.

TYVEK is a registered trademark of Du Pont

(over)

In the test, a commercial grade of asbestos characterized as containing the highest fraction of short fibers was used, which contained fibers down to < 1.0 microns. An airstream containing these fibers was passed through samples of TYVEK[®] that were backed with high quality membrane filters.

The results obtained by both optical and electron microscopy showed TYVEK to be a superior barrier to the shortest commercially available grade of asbestos.

It was concluded properly designed garments of TYVEK 1422A can prevent contaminations of the wearer's street clothes with potential harmful particulates that could be carried from the workplace and into the worker's home. Today, TYVEK is the most widely used protective barrier against asbestos.

For a copy of this study or additional information on how protective clothing of TYVEK can work for you, call or write:

E. I. du Pont de Nemours & Co. (Inc.)
Spunbonded Products Division
TYVEK[®] Industrial Apparel
Centre Road Building
Wilmington, DE 19898
(302) 999-3095

DU PONT Company, Spunbonded Products Division, Centre Road Building, Wilm., DE 19810



NORTH 7700 SERIES HALF MASK AIR- PURIFYING RESPIRATORS

NIOSH/MSHA Certified

The North 7700 Series is the most comfortable respirator available today. What makes it so comfortable? For one thing, the facepiece is made of soft, hypoallergenic silicone rubber. Because silicone rubber's so much more flexible than organic rubber, it conforms to a worker's face, instead of the other way around. And three facepiece sizes make it much easier to fit your workers with NIOSH/MSHA approved 7700 respirators.

The North 7700's cradle suspension system also adds to the comfort of this respirator. The North 7700 doesn't slip like respirators with conventional strap systems. The cradle suspension gives an even seal without irritating pressure points.

The low profile of the North 7700 gives workers a wide field of vision and room for protective eyewear. Its low inhalation and exhalation resistance makes breathing easier, leaving more energy for production.

The North 7700 doesn't stop at safety and comfort. It's easy to maintain. Just unscrew the cartridges, and drop the facepiece into the wash. The direct cartridge-to-facepiece seal means no cartridge receptacles to clean and no sealing gaskets to lose or replace. The silicone rubber facepiece can take a lot more cleanings and *still* come out soft and flexible.

The North 7700 Series half mask has a wide variety of applications in these and many other industries:

Agricultural • Automotive • Battery Manufacturing • Chemical Processing • Metal Finishing • Mining • Petroleum Refining • Pharmaceutical • Shipbuilding • Smelting • Steel • Textile

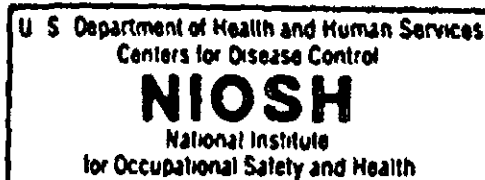


Features	Benefits
State-of-the-art design and materials	Provides wearers with the best fitting, most comfortable facepiece, thereby improving their health and safety
Silicone facepiece material	Wearer comfort. Readily conforms to facial features and doesn't harden with age Easy to clean, non-stick, non-slip surface Durable. Stands up to repeated cleanings better than any other facepiece material Resists distortion, ensuring a better fit, time after time
Contoured sealing flange	The most comfortable, best fitting half mask facepiece available Eliminates discomfort caused by pressure points on facial nerves Design of nose area provides excellent fit and easy breathing
Extended side flanges	Provide best possible seal during talking or other facial motions
Low dead-air space	Improves worker comfort by limiting "re-breathing" of exhaled air
Three overlapping facepiece sizes	Comfortable fits for largest number of respirator wearers
Cradle suspension system	Soft, comfortable cradle straps provide a comfortable, secure fit without slipping Convenient side adjustment of headband straps "One-Piece" suspension prevents loss or mis-assembly of individual straps Easily removed for cleaning
Headband yoke	Allows cartridges to be located lower and further back, improving side vision



Features	Benefits
Exhalation valve assembly	Exceptionally low breathing resistance Positive pressure fit check without removing cover
Plastic inhalation and exhalation valve connectors	Resist corrosion, rusting Allow cleaning at up to 160°F without distortion Aerodynamically designed for low breathing resistance
Low profile design	Allows workers to comfortably wear protective eyewear Facepieces can be used in combination with North faceshields, protective caps and hearing protectors
Direct cartridge-to-facepiece seal	Eliminates the risk of improper seal and reduced protection due to lost or worn sealing gaskets Minimizes replacement parts inventory Ease of maintenance, no cartridge receptacles to clean
Lightweight design	More comfort, greater worker acceptance
Fully certified by NIOSH/MSHA	Employers will be in compliance with an important OSHA requirement
Filters and Cartridges	
Domed fit check and filter cover	Ability to perform negative pressure fit check without removing filters or cartridges and disturbing facepiece seal
Completely color-coded	Simplifies respiratory program administration Reduces the possibility of using incorrect filter or cartridge
Durable sonic-sealed plastic construction	Lightweight No metal to corrode or dent if accidentally dropped No cartridge "dusting"
Filters and cartridges have an inside threaded section	Threads are protected - less apt to become damaged

MODELS
7580S, 7580M, 7580L
7780S, 7780M, 7780L
PERMISSIBLE
RESPIRATOR
FOR
DUSTS, FUMES, MISTS AND RADIONUCLIDES



MINE SAFETY AND HEALTH ADMINISTRATION
NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

APPROVAL NO. TC-21C-152

ISSUED TO

NORTH SAFETY EQUIPMENT
Cranston, Rhode Island, U.S.A.

LIMITATIONS

Approved for respiratory protection against dusts, fumes and mists having a time-weighted average less than 0.05 milligram per cubic meter, asbestos containing dusts and mists and radionuclides.

Not for use in atmospheres containing less than 19.5 percent oxygen or in atmospheres containing toxic gases and vapors.

Not for use in atmospheres immediately dangerous to life or health.

CAUTION

In making renewals or repairs, parts identical with those furnished by the manufacturer under the pertinent approval shall be maintained.

Follow manufacturer's instructions for changing filters.

This respirator shall be selected, fitted, used, and maintained in accordance with Mine Safety and Health Administration, Occupational Safety and Health Administration, and other applicable regulations.

MSHA-NIOSH APPROVAL TC-21C-152

Issued to North Safety Equipment

July 11, 1986

THE APPROVED ASSEMBLY CONSISTS OF THE FOLLOWING NORTH PARTS:
7500-30L, 7500-30M, 7500-30S, 7700-30L, 7700-30M or 7700-30S facepiece
assembly and N7500-8 or 7500-8 (TC-21C-152) filters.

NORTH DUAL CARTRIDGE



7500-8
Highly Toxic Particulates
Filter

Dusts, Fumes, Mists and Radionuclides: Approved for respiratory protection against dusts, fumes and mists having a time-weighted average less than 0.05 milligram per cubic meter and radionuclides

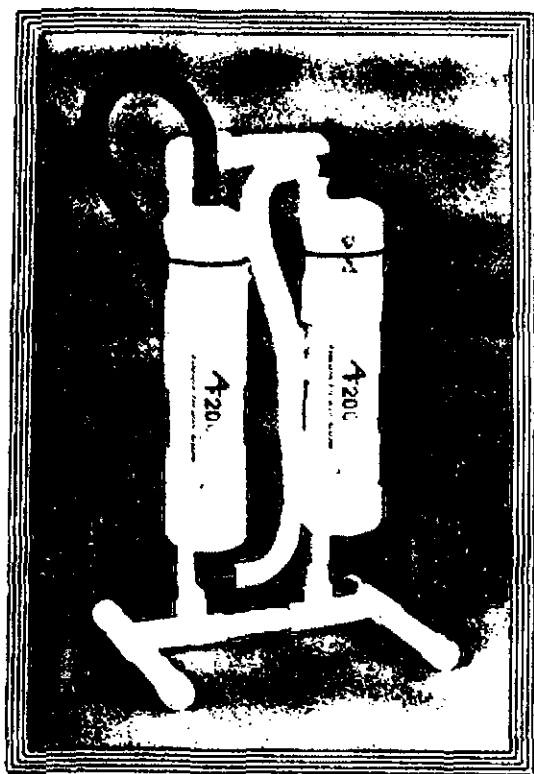
7780L	TC-21C-152
7780M	TC-21C-152
7780S	TC-21C-152

75BP80L	TC-21C-168
75BP80M	TC-21C-168

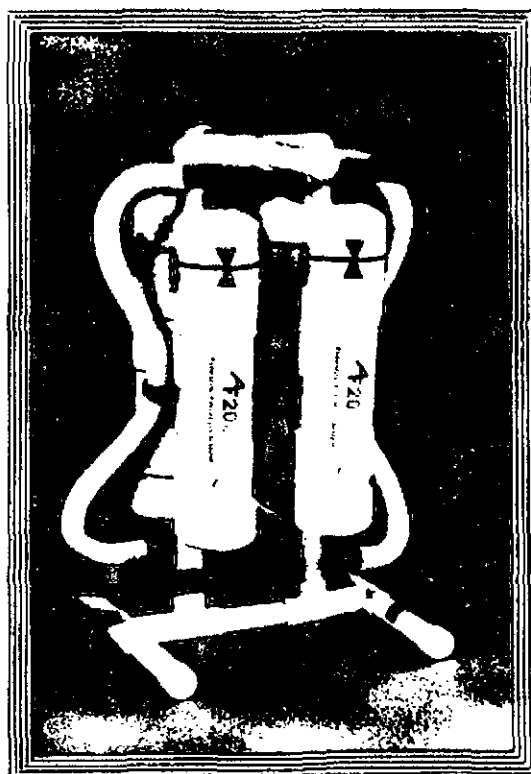
7680	TC-21C-171
7680S	TC-21C-171

CREATIVE INNOVATIONS AF2000

ASBESTOS FILTRATION SYSTEMS

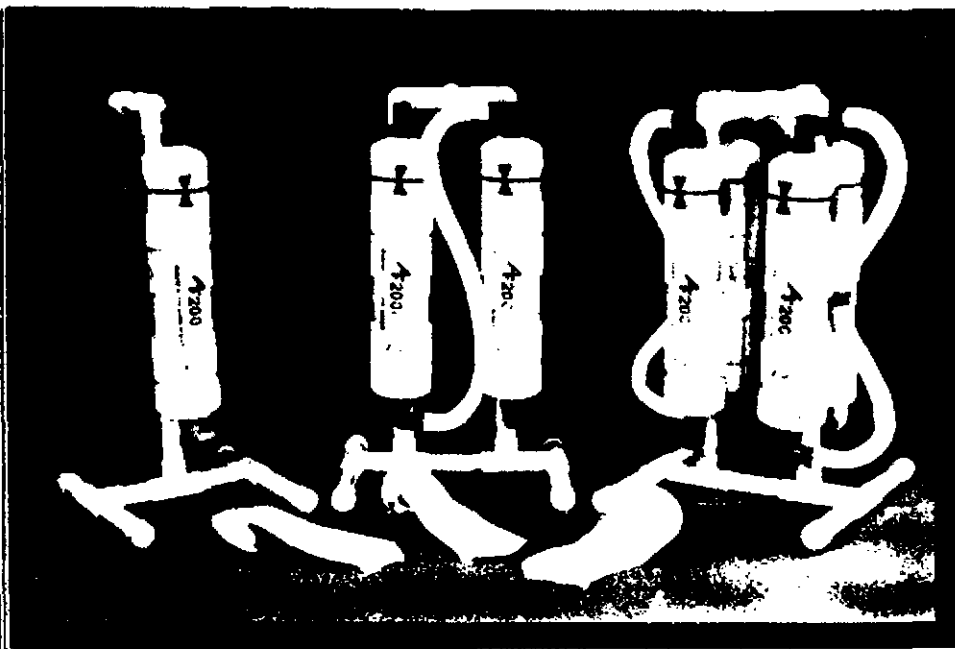


DUAL



QUAD

AF 2000 FAMILY



DUAL & QUAD AF 2000 SPECIFICATIONS

Dimensions:

Dual—21"X21"X33" Weight: 20 lbs.

Quad—21"X14"X33" Weight: 35 lbs.

Diameter: Each vessel, 5½"

Inlet & Outlet: 1¼"

Max. recommended pressure application:
10 lbs./sq. inch

Max. recommended flow rate: 25 G.P.M.

Suggested Retail Price: (Units come complete with: stand, plumbing, 24' of flex hose, 1¼" fittings, and garden hose adaptors).

Now in addition to the AF 2000, Creative Innovations has made available, through selective distributors, a Dual and Quad AF 2000 Low Pressure Asbestos Water Filtration System.

The entire AF 2000 family have the same features, advantages, and benefits; they are constructed from high impact polyvinyl chloride, feature the Direct Flow Forcing Cone, and use the Multi-Position Stand with spring tension retaining clamps.

This design provides for a double or a four stage filtration system, thus allowing for a variety of grades of filter bags to be utilized, depending upon the desired filtration capacity.

Now the user has the option of sequentially staging the filtration with woven poly propylene bags which are available in micron ratings of 100, 50, 25, 10, 5, 3, & 1 microns, thus reducing the frequency of bag changes.

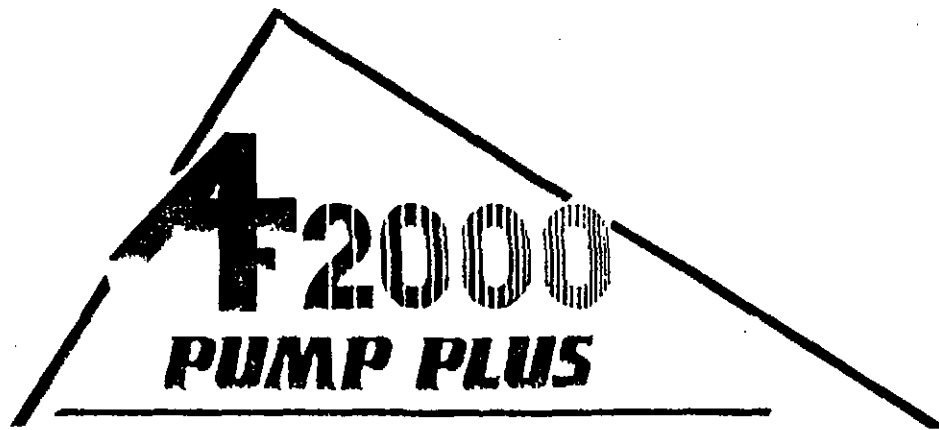
All systems come complete with plumbing, 1¼" fittings, 24' of 1¼" flex hose, garden hose adaptors, and hose retaining clamps that prevent entangled hoses.



CREATIVE INNOVATIONS, INC.
P.O. BOX 3257
WEST CHESTER, PA.
19381

(215) 696-4952

Distributed By:



The AF 2000 Pump Plus is the AF 2000 and more! In addition to the same features, advantages and benefits of the AF 2000 it features the AF 2000 Junior pre-filter, a thermally protected flexible impeller pump, a Mercury float switch, a Diaphragm Actuated Pressure Gauge, and a ground fault circuit interrupter plug.

The AF 2000 Junior pre-filter catches sand and other large abrasives in a 400 micron nylon mesh bag. This safety feature prevents gross contamination from burning out the impellers in the pump.

The pump is a flexible impeller type having a 5 GPM and 15 PSI capacity. It is self priming to seven feet and features thermal protection which will automatically shut down in the event of overheating. The pump is housed in a non-metallic water resisting gasket sealed enclosure featuring a 20 AMP toggle switch, an indicating lamp that remains lit when the pump is in use and a cooling fan which protects from motor burnout.

The Mercury float switch is placed in the shower basin. When the shower basin begins to fill, the water lifts the float switch and activates the pump. While the pump drains the basin, the water level drops, descending the float switch which automatically turns off the pump.

The Diaphragm Actuated Pressure Gauge has a 0-10 PSI calibration range. This gauge will alert the user when the filter bags require changing. An additional feature is an air pressure release valve that allows for the proper reading of the gauges calibration.

A ground fault circuit interrupter plug is provided to protect persons from line-to-ground shock hazards. If an electrical surge due to a short circuit, ie. improper use in an unsafe condition or the like is detected, the ground fault circuit interrupter plug shuts down the entire electrical system from the plug back. It does not prevent shock, but it does limit the time of exposure to a period considered safe for normally healthy persons, 1/30 of a second.

The AF 2000 Pump Plus is available in six different models. The 110 Volt series and the 12 Volt series. Each of the two series has 3 different units available.

The advantage of using multiple stage filtration is increased bag life. Theoretically the larger particles of asbestos are contained in the higher rated bags, rather than clogging the lower rated bags. This increases bag life and decreases the frequency of bag changes.

SPECIFICATIONS:

	<u>SIZE</u>	<u>WEIGHT</u>
SINGLE-	17" x 17" x 30"	50 lbs. Single
DUAL-	17" x 24" x 30"	55 lbs. Dual
QUAD-	17" x 24" x 30"	65 lbs. Quad

Pump- brass w/stainless steel shaft/Buna-N-impeller
 Electrical- 110V or 12V
 Inlet- 1 1/4" or Garden Hose
 Outlet- 1 1/4" or Garden Hose
 Max Flow- 25 GPM, 10 PSI
 Bag Change- Variant to use.

All Pump Plus units come complete with:

24' of 1 1/4" flex hose
 Flex hose clamp
 1 1/4" flex connector fitting (straight)
 1 1/4" flex connector fitting (90° EL)
 Male garden hose adapter
 Female garden hose adapter
 1 set of filter bags

PRICES:

	<u>110V</u>	<u>12V</u>	Micron rated filter bags: \$2.25 each available in 400, 100, 50, 25, 10, 5, 3, & 1 microns
SINGLE	800.00	675.00	
DUAL	950.00	825.00	
QUAD	1200.00	1050.00	

20-HP electric motor with on/off switch, electric hydraulic raising and lowering mechanism, hydrostatic drive for forward and reverse, heavy-duty self-aligning tapered roller bearings, 29x1-7/16-inch spindle shaft, 18-inch bladeguard and shut-off valve, bladeguard mounts to either side of the saw, blade spindle wrench and hammer, six (3V) drive belts, 6x2-inch front wheels, 10x3-inch rear wheels, folding front guide bar with pointer cable for easy access.

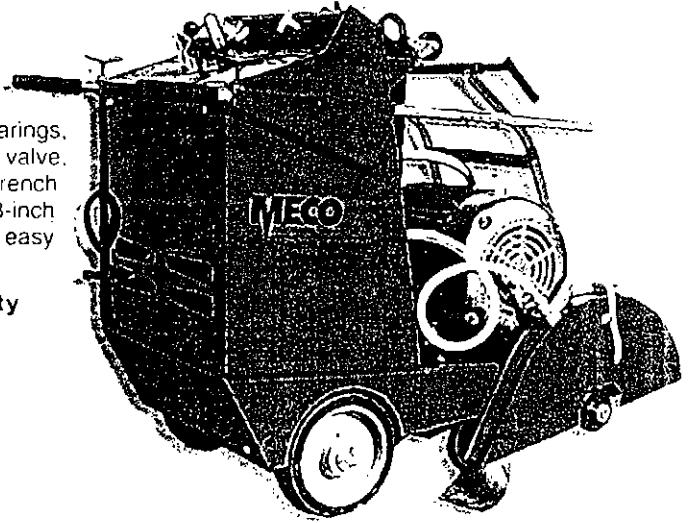
Net weight: 800 lbs.

Dimensions: 29"W x 40"H x 39"L

30" Blade Capacity

#001201 MECO M-20 Electric Flat Saw (self-propelled)

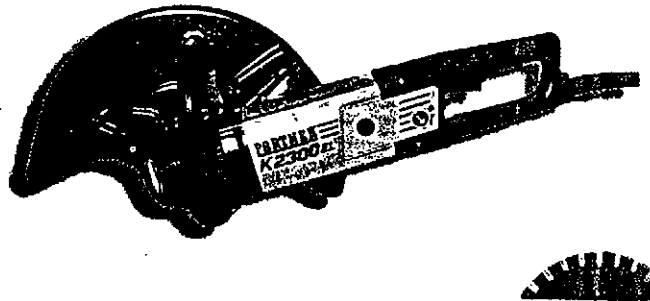
14, 24 or 30-inch Bladeguard, Night Light, Lifting Frame, 12-Volt Water Pump, Jabsco Mechanical Self-Priming Water Pump, Extended Spindleshaf, Upcut Design, Water Pressure Switch, 2-Speed Spindle Shaft Gearbox



PARTNER K2300 Electric Saw

This electric power cutter is efficient, convenient and safe to use. The blade has a "pulling" rotation which means less risk of kick-back and jamming. The machine weighs only 18.3 lbs and has a power rating of 2300 watts. Voltages of 100, 110, 120, 220-240 volts. Blade dia. is 14", Shaft speed 5300 rpm.

#004009 Partner K2300 Electric Saw



WATER FILTRATION SYSTEM

Water will be filtered through attached filter system. This system will use a series of filters with the final filter of 2 microns.

After the water is filtered through this system the water will then be filtered through a second system to two filters with activated charcoal filters. A drawing of this system is attached.

ACTIVATED CHARCOAL FILTERING SYSTEM LAYOUT

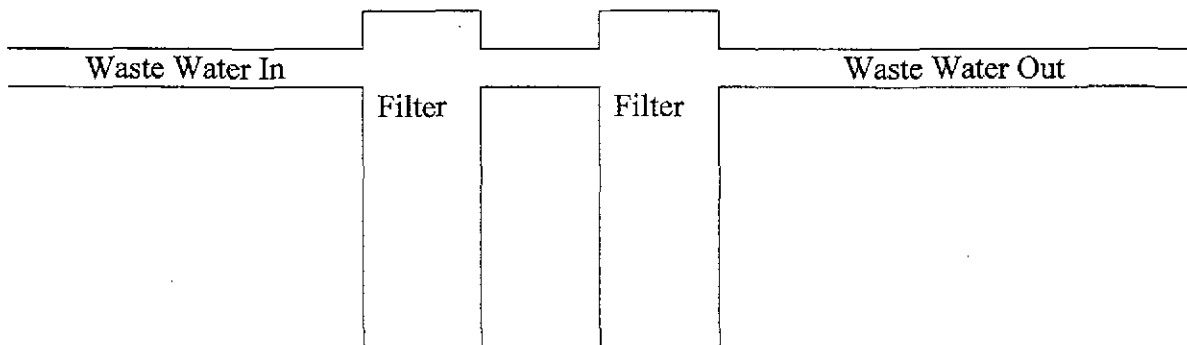


EXHIBIT 5

(14 Pages)

**PHASE II REMEDIAL DESIGN FOR BOILER ROOM
PCB/LEAD PAINT MITIGATION
FEDERAL BUILDING - JUNEAU, ALASKA**

SUBMITTAL COVER SHEET

Material Item: 02083 - Fugitive & Silica Dust Control Procedures

3rd Resubmittal Date: October 20, 2006 (General Statement Added)

Submittal Item No.: 5 - 02083 - Fugitive & Silica Dust Control Procedures

Owner: General Services Administration Phone (907) 271-5085
Northwest/Arctic Region Fax (907) 271-3086
222 West 7th Avenue, Box 5
Anchorage, AK 99518

Project Management: USKH Phone (907) 276-4245
2515 A Street, Fax (907) 258-4653
Anchorage, Alaska 99503

Contractor: Little Susitna Construction Company, Inc. Phone (907) 274-7571
821 "N" Street, Suite 207 Fax (907) 277-3300
Anchorage, Alaska 99501

Subcontractor: Asbestos Removal Specialists of Alaska Phone (907) 451-8550
3049 Davis Road Fax (907) 452-6374
Fairbanks, AK 99709

Certification: By signature below, LSCC states that the materials comply with the specifications of subject contract.

Signed: 
Dominic S.F. Lee, President

Architect/Engineer Review:

- | | |
|---|--|
| <input type="checkbox"/> Approved - No Exception Taken | <input type="checkbox"/> Not Approved (See comments below and/or contained within submittal or shop drawings.) |
| <input type="checkbox"/> Approved As Corrected - (See comments below and/or contained within submittal or shop drawings). | |
| <input type="checkbox"/> Revise and Resubmit (See comments below and/or contained within submittal or shop drawings.) | |

Comments:

Date: _____

By: _____

**SUBMITTAL
FUGITIVE AND SILICA DUST
CONTROL PROCEDURES
PCB/LEAD MITIGATION
FEDERAL BUILDING
JUNEAU AK**

General Contractor:	Little Susitna Construction Co, Inc. 821 N Street, Suite 207 Anchorage AK 99501 Phone 907-274-7571
Asbestos Abatement Contractor:	Asbestos Removal Specialists of Alaska, Inc. 3049 Davis Road Fairbanks AK 99709 Phone 907-451-8550

Submittal Index
Fugitive and Silica Dust Control Procedures
PCB/Lead Mitigation
Federal Building
Juneau AK

1. Control Procedures
-
-

FUGITIVE AND SILICA DUST CONTROL PROCEDURES

PROJECT NAME: PCB/Lead Paint Mitigation

PROJECT LOCATION: Federal Building
Juneau, AK

PLAN DATE: August 7, 2006

ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

AT NO TIME IS THIS DOCUMENT MEANT TO IMPLY THAT THE OWNER IS RESPONSIBLE FOR THE PERFORMANCE OF ANY OF THE WORK TO BE ACCOMPLISHED. ALL OF THE WORK TO BE ACCOMPLISHED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE OWNER'S RESPONSIBILITY IS THE OVERSIGHT OF THE PROJECT.

SUMMARY OF WORK:

Cut concrete and remove from building.

WORK AREA SETUP AND PROTECTION PROCEDURES:

The mechanical room will be the regulated area. The entrances to the area will be sealed to prevent fugitive dust from leaving the area.

WORKER PROTECTION PROCEDURES:

Workers will be provided with personal protective clothing and equipment. All personal protective equipment will be worn properly at all times, including set-up and until final clearance is established. It will be the duty of the designated competent person supervisor to select and approve all the required personal protective clothing and equipment.

Respirators will be selected and used in accordance with manufacturers recommendations and shall be approved by the National Institute for Occupational Safety and Health for use in environments containing airborne dusts. For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne dust environments shall be Type-H, High-efficiency particulate air (HEPA).

It is expected that the combination of engineering controls and work practices will be sufficient to maintain worker full shift average exposures well below the PEL and hence has selected personal protective equipment to be used by workers on this job as follows:

- a. Disposable suits with hoods and booties, taped sealed at wrists and ankles.
- b. Half facemask air purifying negative pressure respirators with high efficiency particulate filters. (Powered air purifying respirators with high efficiency particulate filters will be available for any worker who prefers to use such in place of half face mask respirator.)
- c. Eye protection, head protection, hearing protection and hand protection shall be worn while at the work-site. This includes inside and outside of the work area.

If air monitoring results indicate that shift exposures are exceeding the PEL, all half face mask respirators will be replaced with PAPR's and work practices and engineering controls will be re-evaluated.

RESPIRATORY PROTECTION PROGRAM

The respiratory protection program is attached at the end of this plan. Fit testing records are included at the end of the respiratory protection program.

INITIAL EXPOSURE ASSESSMENT:

The initial exposure assessment will be done at the start of the project.

SPECIFIC WORK PRACTICES AND PROCEDURES:

Cement materials will be cut and removed using wet methods. The materials will be wet before they are removed. When materials are wet they will be removed using concrete cutters and hand tools. The concrete cutting machine will have a steady flow of water to the cutting area to prevent dust and prolong the life of the blade. As materials are removed they will be kept wet and placed in a disposal container which will be lined with two large leak proof polyethylene bags.

If necessary, any chipping or jack hammering of the concrete will be done using wet methods. The area being jack hammered will be continuously misted during the work.

HEPA filtered exhaust machines will be used near the work to further control any dust which may become airborne. The machines will be exhausted to the exterior of the building.

ENGINEERING CONTROLS USED TO KEEP FUGITIVE DUST AND SILICA EXPOSURES BELOW THE PEL INSIDE AND OUTSIDE OF THE WORK AREA:

Wet cutting and handling of the concrete will be used as the primary means of controlling the levels of airborne particulates. In addition HEPA filtered exhaust machines will be used to capture airborne particulates. All concrete once cut will be placed in a designated area and covered until it is removed from the work area and placed in the transportation containers. The transportation containers will be lined with two large polyethylene bags to prevent fugitive dust and silica from becoming airborne during transportation.

SILICA AIR MONITORING, PROCEDURES, LOCATIONS AND THE NUMBER OF DAILY SAMPLES AND TARGET VOLUMES OF EACH SAMPLE TYPE:

Personal air monitoring: Personal breathing zone sampling will be conducted to estimate the exposures of workers on the site for personal exposure limit (PEL) and excursion limit for silica. All sampling for respirable crystalline silica will be in accordance with NIOSH Method 7500. The air monitoring technician and the Contractor's supervisor will choose workers on each shift (at least 25% of the crew) for full shift personal breathing zone air monitoring. Workers will be chosen whose tasks represent the expected highest exposures on the work crew. All phases of the project where workers may be exposed to airborne silica including initial set up, daily working conditions and final cleaning will be monitored. Tear down activities after final clearance will not be monitored.

This sampling will be conducted using battery powered personal air sampling pumps operating at approximately 2.0-2.5 liters per minute. Sample volumes will be adequate to assure with 95% confidence that exposures are below the PEL for silica. Personal pumps will be calibrated before and after use. Sample pumps will be attached to the worker's waist and samplers will be fastened to the collar to draw air from the worker's breathing zone.

Representative workers will be sampled for full shift exposures. Multiple samples may be taken consecutively. Sample periods will be not less than two hours, but this may be modified according to dust loading conditions. Time weighted average (TWA) exposures and 95% upper confidence limits on the TWA will be calculated using standard industrial hygiene statistical formulas in accordance with Federal regulations. Where a full shift can not be sampled, an assumption about the unsampled time will be made and recorded for the sampled worker.

Baseline and Background Air Sampling One sample shall be taken for each 1000 square feet of floor space. Not less than two samples shall be taken in each regulated area. Sampling locations shall be determined by the air monitoring technician. All sampling for respirable crystalline silica will be in accordance with NIOSH Method 7500. The minimum sample volumes will be governed by the level of filter loading. Sample pumps will be pre- and post-calibrated using a rotameter in current calibration.

Work Shift Sampling: The minimum of daily air samples per work will be as follows. Two (2) samples within the work area. One (1) sample outside the entrance to the mechanical room. Two (2) environmental samples in the mechanical room outside of the work area. All sampling for respirable crystalline silica will be in accordance with NIOSH Method 7500. The minimum sample volumes will be governed by the level of filter loading. Sample pumps will be pre- and post-calibrated using a rotameter in current calibration.

Clearance Sampling: Clearance sampling will be done by the Owner

DECONTAMINATION PROCEDURES:

All personnel will enter and exit through the decontamination station. Workers will thoroughly wash their bodies and hair when exiting the work area.

Equipment shall be passed out through the decontamination area as needed or at the end of the project. Tools shall be cleaned and wiped down and cleaned in the work area. All equipment which must not be exposed to water shall be wiped down within the work area. After the area passes final clearance the equipment shall be removed during the removal of the containment area.

EMERGENCY PROCEDURES:

FIRE

During the set up phase of the job, workers must be made aware of the emergency and exiting procedures. **In the case of a fire, decontamination is forgotten in the face of the immediate danger to life.** Fire exits (outside the work area) should be identified, marked, and contingency plans made for emergency exits and lighting.

Prevention is always the best cure. Listed below are some tips that will decrease the chances of a fire.

- Make sure that sources of ignition - pilot lights, equipment that makes sparks etc. are removed or secured.
- Fuel sources, such as gas or propane lines, should be shut down and secured.
- Locate hot spots and potential fire hazards within the containment area, correct and make arrangements for periodic inspection.
- Do not allow matches or lighters inside the containment area. Prohibitions against smoking inside the containment area will be strictly enforced.
- When using cutting torches, open flames or equipment that will emit sparks, a worker designated as the fire watch should be standing by with fire extinguisher equipment. (Do not use Carbon Dioxide extinguisher in a confined or enclosed space.)
- When cutting into a wall make sure that you know what is in the wall and what is behind it.
- Maintain fire extinguisher throughout the work area.
- Clearly mark emergency exits. Post directional signs if necessary and provide emergency lighting.
- Maintain a command post outside the containment area with a telephone (post emergency numbers) to call for fire or emergency equipment. The command post should also have a fire alarm (a compressed air horn works well) that can be plainly heard inside the containment area.

Unless it is immediately apparent that the fire can be stopped with available extinguisher, the workers shall evacuate the area immediately (without decontamination). At no time should a worker stay behind if ordered out of the containment area. IF IN DOUBT - GET OUT.

After the work area is evacuated, all workers shall meet at the designated area outside of the building. Team leaders must account for each person in their team and report to the job supervisor. If a worker is unaccounted for rescue should not be attempted by the workers individually. Supervisory personnel must make snap decisions. If the arrival of qualified fire-fighting personnel is imminent, prudence would dictate that they will have the proper equipment and experience to safely attempt the rescue. Disposable clothing is flammable or can melt. The plastic containment barriers will emit a toxic gas when burned. The fire will pick up speed and spread faster the longer it burns and abatement workers do not have the experience or equipment necessary for rescue without possibly becoming another victim.

The containment barrier covering a fire exit must be plainly labeled and a razor knife attached to the plastic. Exit lighting, in case of power failure during, should be operational and checked daily. In case of a fire in the work area workers would be able to cut through the plastic and escape through the emergency exit. After the fire is out, the workers can worry about the fugitive dust and silica again. The workers should also be aware that smoke kill more people than fire. While the respirators might filter some of the smoke, it is not a oxygen mask. If there is a fire, the best air will be next to the floor.

ACCIDENTS AND EVACUATION

In case of an accident the first priority is the treatment of the injured party. Others in the work area should render assistance within their training and abilities. Emergency services at local clinics and other medical personnel are available for first response care. These first response personnel have the ability and authority to order further evacuation, if needed, to intensive care units.

All workers who are injured in the work area should be evacuated by other workers, if possible. In some cases the injury may be such that a higher level of care may be needed to properly treat the injured person. In this case the responding parties should follow the following procedures, if applicable:

1. Put on protective clothing provided by the contractor and your own portable self-contained breathing apparatus. If it is felt necessary you may don your turnout gear in place of our protective clothing. In many cases our protective clothing may work over your turnout gear.
2. Enter the containment area through the personnel decontamination station. You will be guided through this area by workers on the site.
3. Treat the injured party as necessary to reverse life threatening conditions or ready the injured party for transportation.
4. If the injured party must be evacuated by stretcher, or other means where the injured party cannot be moved by his own power, attempt to remove through the personnel decontamination station. The injured person need not be decontaminated and the emergency personnel need not decontaminate. If the emergency requires evacuation through other areas this is to be done. **The care of the injured is the first consideration.**
5. Once the injured person is outside of the work area his contaminated clothing should, if possible, be removed down to bare skin. Also emergency personnel should remove their protective clothing or turnout gear at this time and leave with the workers at the scene. This includes self-contained breathing apparatus.
6. The injured party can now be transported to the clinic with a minimum of exposure danger to all other parties.

Any cloths or towels used for the treatment of this patient should be bagged in plastic bags, sealed and taped and disposed of as hazardous waste according to the facilities plan. These cloths or towels shall not be burned or incinerated. After the patient has been wiped clean treatment can proceed under normal conditions for the facility.

HEAT RELATED INJURY

Heat Stress & Dehydration

Heat stress and dehydration are two major dangers for all workers. The work requires that workers wear full-body disposable clothing and respirators. These are not comfortable under the best of conditions, but when combined with a hot boiler room and hard labor can become extremely hot. It is important that each worker become acclimated to the environment of the containment area gradually. Pushing too hard is the surest way to develop heat exhaustion or heat stroke. The workers should police themselves and ensure that they drink adequate quantities of water to replace body fluids lost on the job.

Heat Exhaustion

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluids intake, full body clothing, workers not acclimated to heat.

Symptoms: Fatigue, weakness, profuse sweating, pale clammy skin, headache, cramps, vomiting, dizziness, fainting.

Treatment: Remove the worker from the hot area, lay them down and raise the feet, apply cool wet cloths, loosen or remove clothing, allow small sips of water if victim is conscious and not vomiting.

Prevention: Frequent breaks, increased fluid intake, acclimatization to work area environment.

Heat Stroke

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluid intake, full body clothing, workers not acclimated to heat.

Symptoms: Dizziness, nausea, severe headache, hot dry skin, confusion, collapse, delirium, coma, death.

Treatment: Medical emergency, remove worker from hot area, remove clothing, lay them down and cool the body.

Dehydration is another problem associated with hazardous materials abatement work. It is caused by the insufficient fluid intake, coupled with the hot, sweaty work. Workers can guard against dehydration by drinking plenty of water every time they come out of the containment area. Each worker should also keep track of the number of times that they urinate during the day. They should urinate at least twice in a day, less than that means that they are not taking in enough liquid. Alcohol does not count and can actually contribute to dehydration.

POWER FAILURE

In the event of power failure all work will cease until power is restored. Power may be restored by an auxiliary power unit, if available. If the auxiliary unit will not provide sufficient power to run the required number of exhaust machines and other required equipment work will not restart until full power is restored and all exhaust air units are brought back on line. It must also be remembered that many other required pieces of equipment are run of electricity and these must also be in operation.

All equipment will be tested and the containment area integrity tested before work is restarted. Air testing will be done outside the work area to ensure that airborne particulates were not leaked outside work during the power outage.

DECONTAMINATION OR WORK AREA ISOLATION

Where required by the type of work procedures decontamination stations will be provided. In all cases, access between contaminated and uncontaminated rooms or areas shall be through an airlock. In all cases access between any two rooms within the decontamination unit shall be through a plastic sheeting curtained doorways. Separate personnel and equipment decontamination facilities shall be provided. Emergency exits shall be provided from the work area. The personnel decontamination area is the only official entrance and exit, except for emergencies, from the work area.

For regulated areas openings will be sealed where the release of airborne particulates is expected. The regulated area will be established with the use of curtains, portable partitions, or other systems in order to prevent the escape of airborne particulates from the regulated control area. All penetrations of the floor, walls, and ceiling shall be sealed with 6-mil polyethylene plastic and duct tape. Openings will be allowed in the barrier of work area for the supply and exhaust of air for the negative air pressure system.

REGULATED AREA BREACHES

Major Breaches of Regulated Barrier: In the event of a major breach of the containment area all work will cease and repairs will be made to the breach. Air sampling, by the Contractor, will immediately begin in the areas adjacent to the breach. All workers will be evacuated from the area until such time it is determined by the Contracting Officer that there are no airborne particulates in the air outside of the containment area. Written notification by the Contracting Officer will be required for resumption of work, both inside and outside of the containment area where the breach occurred. Other trades will be made aware of the containment activities and cautioned of the consequences of a breach of the area.

DETECTION OF UNSUSPECTED FUGITIVE DUST AND SILICA CONTAMINATION

If unsuspected airborne particulates are detected outside of the work area, in excess of ambient, all work will stop immediately and the source of the particulates will be determined. All workers outside of the work area will be evacuated from the area and the area secured until such time the source is found and corrected and the particulate concentrations are determined to be ambient or less and written permission, by the Contracting Officer, is given to re-enter the area.

INTERNAL ADMINISTRATIVE AND INSPECTION PROCEDURES

The Contractor shall continuously inspect the work area for settled dust. These inspections shall be recorded in the daily logs of the Contractor. The inspection reports and daily logs will be submitted to the Owner weekly.

RESPIRATORY PROTECTION PROGRAM

INTRODUCTION

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished, as far as feasible, by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

In the hazardous materials abatement it is imperative that protective measures be taken. These measures include worker protection (the most important of which is the respirator) and environmental quality. Even though the best of environmental quality procedures are used, in hazardous materials abatement the danger of exposure is great. For this reason the use of respirators during all hazardous materials abatement work is required by Asbestos Removal Specialists of Alaska (ARSA).

Respirators shall be provided by ARSA when hazardous materials abatement work is being done. ARSA shall provide the respirators which are applicable and suitable for the purpose intended. ARSA shall be responsible for the establishment and maintenance of a respiratory protective program which shall include those items listed in the program described herein. This program is in accordance with 29 CFR 1910.134.

Employees of ARSA shall use the provided respiratory protection in accordance with instructions and training received.

ADMINISTRATION

The administrator of this program shall be John Abrams. Mr. Abrams is experienced in the selection, fitting, testing, cleaning, maintenance and instruction in the proper use of respirators and their limitations.

Mr. Abrams has been charged with the following responsibilities:

1. Supervision of respirator selection procedure.
2. Establishment and conduct of periodic training sessions for respirator users.
3. Establishment and conduct of a continuing program of cleaning, inspection, and maintenance of respiratory equipment.
4. Designation of proper storage areas for respiratory equipment.
5. Assurance that the necessary medical approval has been received for each user of respiratory equipment.
6. Continuing inspection and evaluation of all aspects of the respiratory protection program to assure their continued functioning and effectiveness.

RESPIRATOR PROGRAM

Under a good respiratory program both the employer and the employee have certain responsibilities which must be adhered to. These responsibilities, if diligently carried out, will serve as a check and balances system for the program and give maximum protection and benefit for each party. With the diligent work and monitoring by the administrator the respiratory program will be a success and serve employees and employer within the general intent of Federal guidelines and regulations.

Employer Responsibility

1. Respirators shall be provided by the employer, at no charge to the employee, when they are necessary to protect the health of the employee.
2. The employer shall provide the respirator which is applicable and suitable for the intended purpose.
3. The employer shall be responsible for the establishment and maintenance of a respiratory protection program.

4. The employer shall be responsible for the execution of the respiratory program.
5. The employer shall be responsible for ensuring minimum health risks to the employees during hazardous materials abatement work by requiring proper respiratory protection.
6. The employer shall be sure that each employee has read and understands the respiratory program.

Employee Responsibility

1. The employee shall use the respiratory protection in accordance with instructions and training received.
2. The employee shall be responsible for cleaning, inspecting, and making minor repairs on his/her respirator, if necessary, in accordance with instruction and training received.
3. The employee shall report any trouble or malfunction of the respirator to his supervisor.
4. The employee shall cooperate with those doing daily air monitoring and check results of that air monitoring. If the employee has any questions about protection in regards to air quality he/she shall contact his/her supervisor and obtain an understanding of the respiratory protection needed.
5. The employee shall understand the level of respiratory protection required for each project and be entitled to and given the highest degree of respiratory protection compatible with, and feasible for, the job site if so desired.
6. The employee shall use all respiratory equipment and follow all respiratory programs and rules and regulations of the Employer and Federal, State and Local regulatory agencies.

Each employee who uses a filter respirator shall be permitted to change the filter elements whenever an increase in breathing resistance is detected, and an adequate supply of filters elements shall be maintained for this purpose.

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator face pieces whenever necessary to prevent skin irritation associated with respirator use.

No employee shall be assigned to tasks requiring the use of respirators if, based upon his/her most recent medical examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator.

Eating, smoking, drinking, chewing tobacco or chewing gum shall not be permitted while wearing respiratory protective equipment.

SELECTION OF RESPIRATOR

The respirator is the most important piece of personal protective equipment and is the critical line of defense for hazardous materials abatement workers against the health effects of air contaminants.

OSHA regulation 29 CFR 1910.134 (Respiratory Protection Standard) is not specific to hazardous materials, but pertains to respiratory protection from all airborne toxins and particles. This regulation specifies requirements for a respiratory protection program, air quality, use and maintenance of respirators.

OSHA regulation 29 CFR 1910.134 outlines when respirators must be used, who must provide the, and what types are safe and effective to use in a given situation. ARSA is responsible for providing respirators when ever the Permissible Exposure Limit (PEL) to airborne hazardous materials is at or exceeds these levels. The respirator provided must be approved by both the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH).

Respirators are used at ARSA to protect employees exposed to hazardous materials airborne contaminants.

The types of respirators used by ARSA employees on these projects are:

1. Half mask air-purifying respirators, also called Negative Pressure Respirators, other than a disposable respirator, equipped with high efficiency filters.
2. Full facepiece air-purifying respirators equipped with high efficiency filters.

3. Full facepiece supplied-air respirators operated in pressure demand mode.

Filter types used are high-efficiency particulate air filters for airborne particulate exposures, and organic vapor absorbent cartridges for organic substances exposures. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter.

Where respirators are used, ARSA shall select and provide, at no cost to the employee and shall ensure the employee uses the respirator provided.

ARSA shall select respirators from among those jointly approved as being acceptable for protection by NIOSH under the provisions of 30 CFR Part 11.

ARSA shall provide a powered air-purifying respirator instead of any negative-pressure respirator for hazardous materials exposure whenever:

1. An employee chooses to use this type of respirator, and
2. This respirator will provide adequate protection to the employee.

At no time shall a respirator be selected which offers less protection than required for the particular conditions under which it is to be used. However, if desired, a respirator type offering a greater protection factor than needed may be selected. Respirators assigned for higher environmental concentrations may be used at lower concentrations.

TRAINING

Training must be provided before or at the time of initial assignment (unless the employee has received equivalent training *within the previous 12 months*) and at least annually thereafter.

All ARSA employees working on hazardous materials abatement projects shall have received training in hazardous materials abatement and awareness training for the substances being abated. Such training includes the nature of hazards on the abatement projects including organic vapors and use and care of respirators.

The training program will be conducted in a manner that the employee is able to understand. ARSA shall ensure that each employee is informed of the following:

1. Methods of recognizing hazardous materials.
2. The health effects associated with hazardous materials and organic vapors to which the employee might be exposed.
3. The relationship between smoking and hazardous materials in producing lung cancer.
4. The nature of operations that could result in exposure to hazardous materials and the importance of necessary protective controls to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, and any necessary instruction in the use of these controls and procedures.
5. The purpose, proper use, fitting instructions, and limitations of respirators.
6. The appropriate work practices for performing the hazardous materials jobs.
7. Medical surveillance program requirements.

ARSA will make readily available to all affected employees, without cost, all written materials and State of Alaska Codes relating to the employee training program.

FIT TESTING

All tight-fitting respirators will be fit tested under this program.

Any employee required to wear a respirator shall be assured of having a proper fit. Respirators will be selected which are comfortable to the wearer. This shall be achieved with (1) an initial and annual qualitative fit test and (2) both a positive or negative pressure fit test each time the respirator is put on. The

manufacturer's facepiece fitting instructions should be followed. The method used is the Irritant Fume Protocol (smoke test) as described in the attached SOP for fit testing.

Any individual with facial hair (sideburns, beard, mustache) which protrudes into the sealing surface of the masks will be refused fitting. Fitting and issue will be allowed on clean shaven faces only.

The medical status of all users will be determined prior to fitting.

The employee must be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers.

The selection process must be conducted in a room separate from the fit test chamber to prevent odor fatigue. Prior to the selection process, the employee must be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a "comfortable" respirator. A mirror must be available to assist the employee in evaluating the fit and positioning of the respirator. This instruction may not constitute the employee's formal training on respirator use, as it is only a review.

The employee should understand that he/she is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape and, if fit and used properly will provide adequate protection.

The employee holds each facepiece up to the face and eliminates those which obviously do not give a comfortable fit. Normally, selection will begin with a half-mask and if a good fit cannot be found the employee will be asked to test the full facepiece respirators.

The more comfortable facepiece's are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. All donning and adjustments of the facepiece must be performed by the employee without assistance from the test conductor or other persons. Assistance in assessing comfort can be given by discussing the points listed below. If the employee is not familiar with using a particular respirator, the employee must be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

Assessment of comfort must include reviewing the following points with the employee and allowing the worker adequate time to determine the comfort of the respirator:

1. Positioning of mask on nose.
2. Room for eye protection.
3. Room to talk.
4. Positioning mask on face and cheeks.

The following criteria must be used to help determine the adequacy of the respirator fit:

1. Chin properly placed.
2. Strap tension
3. Fit across nose bridge.
4. Distance from nose to chin.
5. Tendency to slip.
6. Self-observation in mirror.

The employee must conduct the conventional negative and positive-pressure fit checks. Before conducting the negative-pressure or positive-pressure test the employee must be told to "seat" the mask by rapidly moving the head from side-to-side and up and down, while taking a few deep breaths.

The employee is now ready for fit testing.

After passing the fit test, the employee must be questioned again regarding the comfort of the respirator. If

it has become uncomfortable, another model of respirator must be tried.

The employee shall be given the opportunity to select a different facepiece and be retested if the chosen facepiece becomes increasingly uncomfortable at any time.

MAINTENANCE

Where practical each employee will be issued his/her own respirator and is responsible for cleaning and maintenance, according to the SOP attached. All respirators shall be inspected routinely before and after each use and during cleaning.

Each respirator user shall be thoroughly trained in the proper inspection procedures to insure that the equipment is in good condition. Inspection shall include the following:

1. Check of head straps for breaks or tears, loss of elasticity, and missing or malfunctioning buckles.
2. Check of facepiece for dirt, cracks, tears, holes, distortion, or any other signs of deterioration.
3. Check of valves for dust, dirt, or detergent residue on the valves or valve seat, cracks, tears, or distortion in the valve material, or missing or defective valve covers.
4. Check of filter elements for correct filter(s), missing or worn gaskets, worn threads, cracks or dents in filter housing, service life indicator or end of service date.
5. Any other checks the user may deem important.

Cleaning and disinfecting shall be done daily by each worker. Workers will use respirator wipe pads to clean their respirators. After cleaning the respirator shall be stored in a clean container until further use. Respirators which are returned to the shop for future use by others shall be cleaned using a mild detergent soap and water solution. After cleaning respirators shall be placed in containers for storage. All respirators shall be inspected daily for proper function of all valves, filters and head straps. Respirators shall be inspected for wear and cracks daily.

STORAGE

Respiratory equipment shall be stored so as to protect it from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals.

Respirators shall be stored in respirator storage boxes where they are protected against damage or distortion by overcrowding.

Routinely used respirators will be stored in a clean plastic bag.

Respirators shall be stored with facepiece and exhalation valve in near normal positions to prevent the rubber or plastic parts from taking a permanent distorted set.

MEDICAL CLEARANCE AND APPROVAL

ARSA shall institute a medical surveillance program for all employees who are required by this section to wear tight-fitting respirators.

ARSA shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided at no cost to the employee and at a reasonable time and place.

ARSA shall make available medical examinations and consultations to each employee covered under Federal, State and Local regulations on the following schedules:

1. Before assignment of the employee to an area where negative pressure respirators are worn.
2. At least annually thereafter.
3. If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees at the frequencies specified by the physician.
4. Exception: No medical examination is required of any employee if adequate records show that the

employee has been examined in accordance with this paragraph with the past 1-year period.

The content of the medical examination shall be in compliance with all Federal regulations.

ARSA will obtain a written opinion from the examining physician. This written opinion must contain the results of the medical examination and must include:

1. The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to hazardous materials.
2. Any recommended limitations on the employee or on the use of personal protective equipment such as respirators.
3. A statement that the employee has been informed by the physician of the results of the medical examination, and of any medical conditions that may result from hazardous materials exposure.

ARSA shall make available a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

SURVEILLANCE/INDUSTRIAL HYGIENE EVALUATION

Exposure monitoring shall be performed to determine accurately the airborne concentrations of hazardous materials or other contaminants to which employees may be exposed. Determinations of employee exposure must be made from breathing zone air samples that are representative of the 8-hour TWA of each employee.

ARSA will conduct initial and periodic personal breathing zone sampling as necessary to calculate representative 8 hour TWA exposures for all employees on each job. If initial or periodic monitoring indicates that exposures are less than the OSHA action level for the contaminant, monitoring may be discontinued.

All samples will be evaluated using the OSHA Reference Method by an independent testing laboratory. This laboratory shall have instituted quality assurance programs as outlined in Federal regulations.

INSPECTION/AUDITING IN WORKPLACE

The supervisor (competent person) on each job is responsible for checking the use of respirators on the job.

The supervisor will inspect respirators to be sure they are clean, in good operating condition and that the correct HEPA filters are in use.

The supervisor shall be responsible for checking that each employee is wearing respirator capable of providing adequate protection to the employee.

Representative 8-hour TWA employee exposure must be determined on the basis of one or more samples representing full-shift exposure for employees in each work area.

EXHIBIT 6

(26 Pages)

**PHASE II REMEDIAL DESIGN FOR BOILER ROOM
PCB/LEAD PAINT MITIGATION
FEDERAL BUILDING - JUNEAU, ALASKA**

SUBMITTAL COVER SHEET

Material Item: 02084 - Asbestos Abatement Procedures

Resubmittal Dated: September 18, 2006 (Revised Per Comments)

Submittal Item No.: 6 - Asbestos Abatement Plan
6a - 1.4 A - Training
6b - 1.4 B - Competent Person
6c - 1.4 C - Work Plan
6d - 1.4 D - Agency Notifications
6e - 1.4 E - Product Data

Owner: General Services Administration
Northwest/Arctic Region
222 West 7th Avenue, Box 5
Anchorage, AK 99518
Phone (907) 271-5085
Fax (907) 271-3086

Project Management: USKH
2515 A Street,
Anchorage, Alaska 99503
Phone (907) 276-4245
Fax (907) 258-4653

Contractor: Little Susitna Construction Company, Inc.
821 "N" Street, Suite 207
Anchorage, Alaska 99501
Phone (907) 274-7571
Fax (907) 277-3300

Subcontractor: Asbestos Removal Specialists of Alaska
3049 Davis Road
Fairbanks, AK 99709
Phone (907) 451-8550
Fax (907) 452-6374

Certification: By signature below, LSCC states that the safety plan complies with the specifications of subject contract.

Signed:


Dominic S.F. Lee, President

Architect/Engineer Review:

- | | |
|---|--|
| <input type="checkbox"/> Approved - No Exception Taken | <input type="checkbox"/> Not Approved (See comments below and/or contained within submittal or shop drawings.) |
| <input type="checkbox"/> Approved As Corrected - (See comments below and/or contained within submittal or shop drawings.) | |
| <input type="checkbox"/> Revise and Resubmit (See comments below and/or contained within submittal or shop drawings.) | |

Comments:

Date: _____

By: _____

ASBESTOS RESUBMITTAL

ITEM NO.	
1.1A	AIR MONITORING PLAN ADDED TO WORK PLAN
1.4C	DIAGRAM OF ACM WORK ADDED. THIS WAS NOT SPELLED OUT TO BE PART OF THE PLAN IN THE SPECIFICATIONS.
1.4D	BECAUSE TIME FOR START OF THE ASBESTOS ABATEMENT HAS NOT BEEN DETERMINED THIS ITEM WILL NOT BE UPDATED. THE START OF ASBESTOS ABATEMENT FOR BOTH AKDOL AND EPA IS TIME SENSITIVE. NOTIFICATIONS WILL BE SENT 10 WORKING DAYS BEFORE WORK BEGINS AND FORWARDED TO THE OWNER AT THAT TIME.

**RESUBMITTAL
ASBESTOS ABATEMENT
PCB/LEAD MITIGATION
FEDERAL BUILDING
JUNEAU, AK**

General Contractor:	Little Susitna Construction Co, Inc. 821 N Street, Suite 207 Anchorage AK 99501 Phone 907-274-7571
Asbestos Abatement Contractor:	Asbestos Removal Specialists of Alaska, Inc. 3049 Davis Road Fairbanks AK 99709 Phone 907-451-8550

**Submittal Index
Asbestos Abatement
PCB/Lead Mitigation
Federal Building
Juneau AK**

1. Training
 2. Competent Person
 3. Work Plan
 4. Copy of Notifications to EPA and AKDOL
 5. Product Data/MSDS
 - a. Encapsulant
 - b. Spray glue
-

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

00004443



Expires

2/20/2007

JOHN H. ABRAMS

AK 99711

SSN# 531-36-7886

WGT	DOB	HGT
212	10/16/1941	5'11
300459		

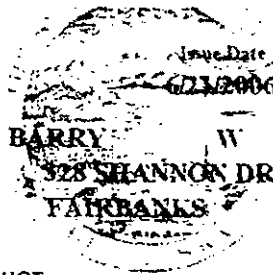
RENEWAL


Greg O'Clary
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

20060616



Expires

6/23/2007

SSN#

WGT DOB
215 1/8/1980
310316

HGT
6'

NEW

AK 99701


Greg O'Claray
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

20030511



Expires
5/9/2007

SSN#

WGT DOB

175 4/1/1982


302766

HGT

5'11"

RENEWAL

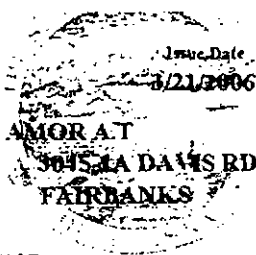
AK 99701


Greg O'Claray
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

19991063



Expires

6/11/2007

DIEGO

AK 99709

SSN#

WGT DOB
170 10/3/1949
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HGT
5'5

RENEWAL


Greg O'Claray
Commissioner

Alaska Department of Labor

Certificate of Fitness

ASBESTOS ABATEMENT

20030315



Expires

3/28/2007

GILBERT

AK 99701

SSN#

WGT DOB
185 9/21/1981
301869

HGT
5'10"

RENEWAL

Greg O'Clary
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

20040157



Expires

2/13/2007

GUSTAFSON

AK 99701

SSN#

WGT DOB

205 12/19/1951

301103

HGT

6'1

RENEWAL

Greg O'Claray
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

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Expires
6/23/2007


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HGT
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NEW

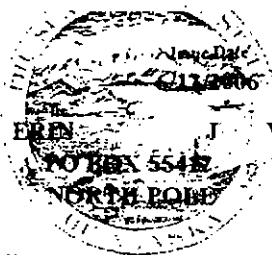
AK 99709


Greg O'Claray
Commissioner

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT

19960544



Expires

6/29/2007

VINCENT

SSN#

AK 99705

WGT DOB
200 1/1/1969

HGT
5'11"

301810

RENEWAL

Greg O'Clary
Commissioner

LOIS

Alaska Department of Labor
Certificate of Fitness

ASBESTOS ABATEMENT 00000336

Expires 4/29/2007



MIDDLETON
ROAD
AK 99701

SSN# 001-03-1550

WGT DOB HGT
290 3/30/1940 62'

302307 RENEWAL

Greg O'Clarry
Commissioner



Amor Diego
3045 1A Davis Road
Fairbanks AK 99709
907-530-0889

This is to certify that Amor Diego, an employee of Asbestos Removal Specialists of Alaska, Inc., is a competent person designated for overseeing Asbestos Removal, Lead-Based Paint Abatement, and Hazardous Waste Operations and Emergency Responses.

Erin has completed Asbestos Abatement Course #19991063, and Lead Abatement Course for Supervisors. Amor has worked for Asbestos Removal Specialists of Alaska for since 1996. Amor's experience includes many projects with asbestos removal, reinstallation, demolition, lead abatement and carpentry work. Amor has worked on remote projects and understands the importance of logistical support and planning for these projects.

Amor is experienced in all phases of Asbestos abatement, transportation of asbestos and hazardous materials, air monitoring and quality control.

Amor is assigned the task of identifying existing asbestos hazards in the work place and given he authority to take prompt corrective measures to eliminate them. His duties shall include the following:

1. Establishing the negative pressure enclosure, ensuring its integrity, and controlling entry to and exit from the enclosure;
2. Supervising any employee exposure monitoring required by the regulations;
3. Ensuring that all employees working within such an enclosure wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in the regulations;
4. Ensuring that engineering controls in use are in proper operating conditions and are functioning properly;
5. Supervising the removal of ACM from the project using methods specified in the specifications and following Federal and State regulations;
6. Enforcing the Company Safety Policies and consistently monitoring safety practices on the job site;
7. Keeping records of the project as needed to ensure quality control, and meet all Federal, State and specifications requirements.

In Hazardous Waste Operations and Emergency Response projects Amor is responsible for:

1. Establishing the required control zones, ensuring their integrity and controlling entry to and exit from the control zones;
2. Supervising any employee exposure monitoring required by the regulations;
3. Assessing the site for hazardous materials and identifying potential hazardous materials on the site;
4. Initiating the appropriate response action to any identified hazardous materials found in the job site. Initiating the appropriate response action to protect other trades working in the area prior to the removal of hazardous materials from the job site;
5. Ensuring that all employees working within the control zones wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in the regulations;
6. Ensuring that engineering controls in use are in proper operating condition and are functioning properly;
7. Supervising the removal of the Hazardous Materials from the project using methods specified in the specifications and following Federal and State regulations.
8. Enforcing the Company Safety Policies, and the Job Site Specific Safety Policies, and following Federal and State regulations.
9. Keeping records of the project as needed to ensure quality control and meet all Federal, State, and specification requirements.

In Lead-Based Paint Abatement operations Amor is responsible for:

1. Recognizing the measures necessary to protect the building occupants. Establishing the required control zones, ensuring their integrity and controlling entry to and exit from the control zones;
2. Identifying and implementing the steps required in the abatement site preparation. This includes establishing the proper engineering controls for worker, occupant and building protection. Establishing all hygiene facilities and practices for the project;
3. Understanding and working with the complexities of occupant relocation and the temporary storage of occupant's furniture and supplies;
4. Implementing the proper containment techniques using the proper materials to construct the containment area. Test containment areas for integrity and insure proper ventilation;
5. Identifying the methods to minimize the debris to be disposed of which will contain lead dust;
6. Recognizing the scope of the abatement project and select the proper procedures for the specific project;
7. Understanding and supervise the procedures for clearance testing;
8. supervising any employee exposure monitoring required by the regulations;
9. Enforcing the company safety Policies and consistently monitoring safety practices on the job site;
10. Keeping all on-site abatement records.

PAST PROJECTS:

Kaltag School Renovations 2004
Liquidation Sales Building Demolition 2004
Consolidated Freight Fire Proofing Removal 2004
Golden Heart Utilities Lift Stations 2004
Nulato School Boiler Replacement 2004
Skip Johnson House Demolition 2004
Alcan Border Station Mechanical Repairs 2004

Fairbanks Memorial Hospital Tile Removal-2003-----

Wood Center Upgrades 2003
Denali Park Hotel Demolition 2003
Tanana Valley Clinic Remodel 2003
Ben Eielson High School Roof 2003
Assembly of God Church Reside 2003

ASBESTOS ABATEMENT PLAN

PROJECT NAME: PCB/LEAD MITIGATION

PROJECT LOCATION: Federal Building
Juneau, AK

PLAN DATE: July 24, 2006
Revised September 12, 2006

SUMMARY OF WORK:

The work consists of removal of the following asbestos-containing building materials:

Removal of gaskets from boilers. Gasket is located at the base of the boiler jacket where it connects to the fire box.

The boiler has been rebuilt in the past and all other asbestos materials have been removed.

WORK AREA SETUP AND PROTECTION PROCEDURES:

A containment area will be set up around the boilers prior to abatement. Containment area will have a decontamination unit at the entry, which workers will enter and exit through. The work area will be in the mechanical room of the building and only maintenance workers should have access to this area. All ventilation systems within the containment area will be shut down and sealed.

WORKER PROTECTION PROCEDURES:

Workers will be provided with personal protective clothing and equipment. All personal protective equipment will be worn properly at all times, including set-up and until final clearance is established. It will be the duty of the designated competent person supervisor to select and approve all the required personal protective clothing and equipment.

Respirators will be selected and used in accordance with manufacturers recommendations and shall be approved by the National Institute for Occupational Safety and Health for use in environments containing airborne asbestos fibers.

For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne asbestos environments shall be Type-H; High-efficiency particulate air (HEPA):

It is expected that the combination of engineering controls and work practices will be sufficient to maintain worker full shift average exposures well below 1.0 fibers per cubic centimeter (f/cc) and hence has selected personal protective equipment to be used by abatement workers on this job as follows:

- a. Disposable asbestos abatement suits with hoods and booties, taped sealed at wrists and ankles.
- b. Rubber boots
- c. Half facemask air purifying negative pressure respirators with high efficiency particulate filters. (Powered air purifying respirators with high efficiency particulate filters will be available for any abatement worker who prefers to use such in place of half face mask respirator.)
- d. Eye protection, head protection, hearing protection and hand protection shall be worn while at the work-site. This includes inside and outside of the asbestos work area.

If air monitoring results indicate that shift exposures are exceeding 1.0 f/cc, all half face mask respirators will be replaced with PAPR's and work practices and engineering controls will be re-evaluated.

INITIAL EXPOSURE ASSESSMENT:

The initial exposure assessment is attached to this work plan.

ASBESTOS REMOVAL PROCEDURES:

Asbestos materials will be removed using wet methods. The materials will be wet before they are removed. When materials are wet they will be removed using hand tools. As materials are removed they will be placed in a properly marked asbestos waste disposal bag. Bags will have air removed and be sealed. After bags are sealed they will then be placed in a second bag which will have the air removed and the bag will also be sealed.

properly carried out.

AIR MONITORING, PROCEDURES, LOCATIONS AND THE NUMBER OF DAILY SAMPLES AND TARGET VOLUMES OF EACH SAMPLE TYPE:

Personal air monitoring: Personal breathing zone sampling will be conducted to estimate the exposures of workers on the site for comparison to ADOL personal exposure limit (PEL) and excursion limit for asbestos. The air monitoring firm's air sampling technician and the Contractor's supervisor will choose at least two workers on each shift (or at least 25% of the crew) for full shift personal breathing zone air monitoring. Workers will be chosen whose tasks represent the expected highest exposures on the work crew. All phases of the project where workers may be exposed to airborne asbestos fibers including initial set up, abatement and final cleaning will be monitored. Tear down activities after final clearance will not be monitored.

This sampling will be conducted using battery powered personal air sampling pumps operating at approximately 2.0-2.5 liters per minute. Sample volumes will be adequate to assure with 95% confidence that exposures are below the ADOL action level of 0.1 fibers per cubic centimeter (f/cc). Personal pumps will be calibrated before and after use. Samples will be collected in 25mm, long conductive cowl, cassettes, with 0.8 micron MCE filters for analysis by phase contrast microscopy. Sample pumps will be attached to the worker's waist and samplers will be fastened to the collar to draw air from the worker's breathing zone.

Representative workers will be sampled for full shift exposures. Multiple samples may be taken consecutively. Sample periods will be not less than two hours, but this may be modified according to dust loading conditions. Time weighted average (TWA) exposures and 95% upper confidence limits on the TWA will be calculated using standard industrial hygiene statistical formulas in accordance with ADOL regulations. Where a full shift can not be sampled, an assumption about the unsampled time will be made and recorded for the sampled worker. Thirty minute personal samples will be taken during the most dusty operation to test for compliance with the ADOL excursion limit. These excursion limit samples may be taken on a worker who is being sampled for full shift exposure or on another worker. In the former case, excursion limit samples may be included among the consecutive samples taken on one of the workers.

Baseline and Background Air Sampling One sample shall be taken for each 1000 square feet of floor space. Not less than two samples shall be taken in each regulated area. Sampling locations shall be determined by the air monitoring technician. The samples will be collected in 25mm, long conductive cowl, cassettes, with 0.8 micron MCE filters for analysis by phase contrast microscopy. The samples will be drawn at between 2 and 10 lpm using high speed AC powered pumps or battery powered personal air sampling pumps. The minimum sample volumes will be governed by the level of filter loading. The lower limit of detection will not exceed 0.01 f/cc for these area samples. Sample pumps will be pre- and post-calibrated using a rotameter in current calibration.

Work Shift Sampling: The minimum of daily air samples per work will be as follows. Two (2) samples within the work area. One (1) sample outside the entrance to the work area. Two (2) environmental samples in the mechanical room outside of the work area. The samples will be collected in 25mm, long conductive cowl, cassettes, with 0.8 micron MCE filters for analysis by phase contrast microscopy. The samples will be drawn at between 2 and 10 lpm using high speed AC powered pumps or battery powered personal air sampling pumps. The minimum sample volumes will be governed by the level of filter loading. The lower limit of detection will not exceed 0.01 f/cc for these area samples. Sample pumps will be pre- and post-calibrated using a rotameter in current calibration.

Clearance Sampling: Clearance sampling will be done by the Owner

EMERGENCY PROCEDURES:

FIRE

During the pre-abatement phase of the job, workers must be made aware of the emergency and exiting procedures. In the case of a fire, decontamination for asbestos is forgotten in the face of the immediate danger to life. Fire exits (outside the containment barriers) should be identified, marked, and contingency plans made for emergency exits and lighting.

Prevention is always the best cure. Listed below are some tips that will decrease the chances of a fire.

need not be decontaminated and the emergency personnel need not decontaminate. If the emergency requires evacuation through other areas this is to be done. The care of the injured is the first consideration.

5. Once the injured person is outside of the containment area his contaminated clothing should, if possible, be removed down to bare skin. Also emergency personnel should remove their protective clothing or turn out gear at this time and leave with the asbestos workers at the scene. This includes self-contained breathing apparatus.
6. The injured party can now be transported to the clinic with a minimum of exposure danger to all other parties.

Any cloths or towels used for the treatment of this patient should be bagged in plastic bags, sealed and taped and disposed of as hazardous waste according to the facilities plan. These cloths or towels shall not be burned or incinerated. After the patient has been wiped clean treatment can proceed under normal conditions for the facility.

HEAT RELATED INJURY

Heat Stress & Dehydration

Heat stress and dehydration are two major dangers for all abatement workers. The asbestos abatement work requires that workers wear full-body disposable clothing and respirators. These are not comfortable under the best of conditions, but when combined with a hot boiler room and hard labor can become extremely hot. It is important that each worker become acclimated to the environment of the containment area gradually. Pushing too hard is the surest way to develop heat exhaustion or heat stroke. The workers should police themselves and ensure that they drink adequate quantities of water to replace body fluids lost on the job.

Heat Exhaustion

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluids intake, full body clothing, workers not acclimated to heat.

Symptoms: Fatigue, weakness, profuse sweating, pale clammy skin, headache, cramps, vomiting, dizziness, fainting.

Treatment: Remove the worker from the hot area, lay them down and raise the feet, apply cool wet cloths, loosen or remove clothing, allow small sips of water if victim is conscious and not vomiting.

Prevention: Frequent breaks, increased fluid intake, acclimatization to work area environment.

Heat Stroke

Causes: High air temperature, high humidity, low air movement, hard work, not enough breaks, insufficient fluid intake, full body clothing, workers not acclimated to heat.

Symptoms: Dizziness, nausea, severe headache, hot dry skin, confusion, collapse, delirium, coma, death.

Treatment: Medical emergency, remove worker from hot area, remove clothing, lay them down and cool the body.

Dehydration is another problem associated with asbestos abatement work. It is caused by the insufficient fluid intake, coupled with the hot, sweaty work. Workers can guard against dehydration by drinking plenty of water every time they come out of the containment area. Each worker should also keep track of the number of times that they urinate during the day. They should urinate at least twice in a day, less than that means that they are not taking in enough liquid. Alcohol does not count and can actually contribute to dehydration.

POWER FAILURE

In the event of power failure all work will cease until power is restored. Power may be restored by an auxiliary power unit, if available. If the auxiliary unit will not provide sufficient power to run the required number of negative air machines and other required equipment work will not restart until full power is restored and all negative air units are brought back on line. It must also be remembered that many other required pieces of equipment are run of electricity and these must also be in operation.

All equipment will be tested and the containment area integrity tested before work is restarted. Air testing will be

The person exposed must be made aware of the exposure, the amount of the exposure, and should be offered a physical examination to document his/her current health status. The records of exposure should be given to the Alaska Department of Labor, Office of Occupational Safety & Health and Copies of the records should be retained by the contractor for a minimum of 30 years.

In the case of personnel equipped with the proper personal protective equipment, immediate decontamination is unnecessary. The asbestos spill should be cleaned up immediately using all necessary tools. All ACM should be immediately available. If respirator protection can be immediately determined then appropriate respirators should be used.

If the surface permits, a glove bag can be sealed in place around the spill area. It is a simple process for the worker to further wet the ACM with an encapsulant in a spray bottle and place it into the bottom of the glove bag. A HEPA-filter equipped vacuum can be inserted in the port on the glove bag to all visible ACM has been picked up the surface should be sprayed liberally with an encapsulant. The HEPA-filter equipped vacuum is used to collapse the glove bag. It is sealed and placed inside an asbestos disposal bag for disposal.

If a glove bag cannot be sealed around the area of the spill, the plastic covering should be lifted at one corner and an encapsulant spray wand inserted to soak the material. After complete saturation is achieved, the ACM can be picked up using shovels, dustpans or other suitable tools. If possible, the intake from a HEPA-filter equipped negative air machine should be placed as close to the spill as possible to catch any fibers that might become airborne. The saturated ACM is double-bagged in asbestos disposal bags, sealed, and ready for disposal at an approved landfill.

Emergency Numbers for this Project:

Juneau Fire and Ambulance	911
ARSA Office	451-8550
John Abrams	322-0709
Building Manager	
Consultant (Matt White)	748-2730
Project Foreman (Amor Diego)	890-0889

ABATEMENT PLAN WRITTEN BY:

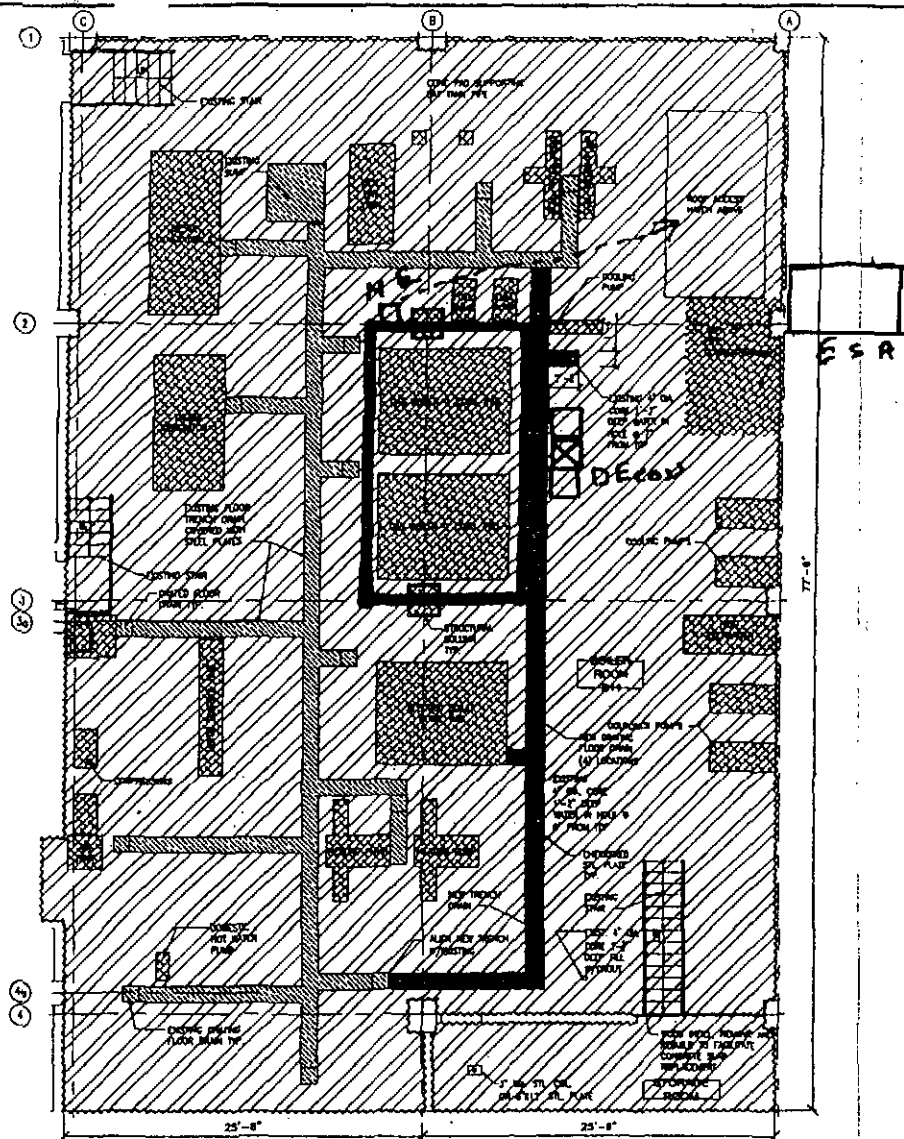

John H. Abrams, Asbestos Project Designer (HDK90606)

I have read this plan and it accurately describes abatement procedures, engineering controls and disposal procedures appropriate for this project.


Amor Diego, Competent Person

DRAWING NOTES:

1. CONTAINMENT AREA IS AS OUTLINED AROUND THE BOILERS
2. NEGATIVE EXHAUST MACHINE SHALL BE LOCATED AS SHOWN. AIR WILL BE EXHAUSTED OUT OF THE ROOF ACCESS HATCH.
3. DECON UNIT WILL BE POSITIONED AS SHOWN. DECON UNIT WILL BE ATTACHED TO THE WORK AREA. ALL WORKERS SHALL ENTER AND EXIT THE WORK AREA THROUGH THE DECON UNIT.
4. ACM DEBRIS/WASTE WILL BE STORED IN AN ARSA VAN IN THE EQUIPMENT STAGING AREA.
5. EQUIPMENT STAGING AREA WILL BE LOCATED IN THE LAY-DOWN AREA FOR THE PROJECT. MAJOR EQUIPMENT WILL BE THE ARSA TRUCK FOR STORAGE OF WASTE.
6. ACCESS TO THE WORK AREA WILL BE THROUGH THE DECON STATION. ACCESS TO THE MECHANICAL ROOM SHALL BE THROUGH THE DOOR EXITING INTO THE PARKING GARAGE.
7. SAFETY EQUIPMENT SHALL BE STORED AT THE ENTRANCE TO THE DECONTAMINATION STATION.
8. BOILER WILL BE DISASSEMBLED AND REMOVED THROUGH THE ROOF ACCESS.



1 PCB/LEAD CONTAINING PAINT AND ASSOCIATED CONCRETE TOPPING SLAB ABATEMENT PLAN



NOTES

**ASBESTOS
REMOVAL
SPECIALISTS
OF
ALASKA, INC.**

(907) 451-8550
FAX (907) 452-6374
Email: arsa@acsalaska.net
3049 Davis Road, Fairbanks, AK 99709
AK Business License # BL-090800
Contractor License # A-14675

DATE: July 26, 2006

STATE OF ALASKA DEPARTMENT OF LABOR
DIVISION OF LABOR STANDARDS AND SAFETY
3301 Eagle Street, Suite 305
ANCHORAGE AK 99503

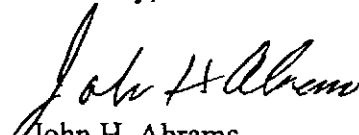
ATTN: Lara Dunham

RE: This is notification of intent to perform asbestos abatement as required by 8 ACC 61.620

Project Name: PCB/Lead Paint Mitigation
Project Location: Federal Building
Juneau AK
Project Start Date: September 1, 2006
Project End Date: October 31, 2006

Employee	Certificate No.	Expiration Date
Abrams, John	4443	02-20-07
Bodle, Barry	20060616	06-23-07
Bodle, Christopher	20030511	05-09-07
Diego, Amor	19991063	06-11-07
Gilbert, Larry	20030315	03-28-07
Gustafson, Jon	20040157	02-13-07
Middleton, John J	0336	05-29-07
Thurneau, Josiah	20060615	06-26-07
Vincent, Erin	19990544	06-29-07

Sincerely,


John H. Abrams
Contract Manager

NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project # 06-31	Postmark	Date Received	Notification #	
I. Type of Notification (O=Original R=Revised C=Cancelled) O				
II. FACILITY INFORMATION: (Identify owner, removal contractor, and other operator)				
OWNER NAME: General Services Administration Northwest/Arctic Region				
Address: 222 West 7 th Avenue, Box 5				
City: Anchorage	State: Alaska	Zip: 99513		
Contact: Doug Brandon	Phone No.: 907-271-5085			
REMOVAL CONTRACTOR: ASBESTOS REMOVAL SPECIALISTS OF ALASKA, INC.				
Address: 3049 Davis Road				
City: Fairbanks	State: Alaska	Zip: 99709		
Contact: John Abrams	Phone No. 907-451-8550			
OTHER OPERATOR:				
Address:				
City:	State:	Zip:		
Contact:	Phone No.:			
III. TYPE OF OPERATION (D = Demo O = Ordered Demo R = Renovation E = Emergency Renovation) R				
IV. IS ASBESTOS PRESENT? (YES / NO) YES				
V. FACILITY DESCRIPTION (Including Building name, number and floor or room number)				
Building Name: Juneau Federal Building				
Address: 709 W 9 th Street				
City: Juneau	State: Alaska	Zip: 99801		
VI. SITE LOCATION:				
Building Size: 464,160 sf	Number of Floors: 10	Age in Years: 42		
Present Use: Federal Office Building	Prior Use: Same			
VI. Procedure, including analytical method, if appropriate, used to detect the presence of asbestos materials: Survey from Owner of Project.				
VII. Approximate Amount of Asbestos, Including:	RACM To Be Removed	Nonfriable Asbestos Material Not To Be Removed		Indicate Unit of Measure Below UNIT
1. Regulated ACM to be removed 2. Category I ACM not removed 3. Category II ACM not removed		Category I	Category II	
Boiler door seals		90		If
VIII. Scheduled Dates Asbestos Removal (MM/DD/YY)	Start: 9-1-06	Complete: 10-31-03		
IX. Scheduled Dates Demo/Renovation (MM/DD/YY)	Start: 8-15-06	Complete: 1-15-07		

X. Description of Planned Demolition or renovation Work, and Method(s) to be Used: Removal of door seals in old boilers before they are demolished and removed from the site.		
XI. Description of Work Practices and Engineering Controls to be Used to Prevent Emissions of Asbestos at the Demolition and Renovation Site: Removal will be done using wet methods and hand tool to remove the seals. Waste will be packaged for disposal at an approved landfill.		
XII. WASTE TRANSPORTER #1		
Name: Asbestos Removal Specialists of Alaska, Inc.		
Address: 3049 Davis Road		
City: Fairbanks	State: Alaska	Zip: 99709
Contact Person: John Abrams	Tel: 907-451-8550	
WASTE TRANSPORTER #2		
Name:		
Address:		
City:	State:	Zip:
Contact:	Tel:	
XIII. WASTE DISPOSAL SITE		
Name: Fairbanks North Star Borough Landfill		
Address: 455 Sanduri Road		
City: Fairbanks	State: Alaska	ZIP: 99701
Telephone No: 907-459-1482		
XIV. If Demolition Ordered By A Government Agency, Please Identify Below		
Name:	Title:	
Authority:		
Date of Order:	Date Ordered to Begin:	
Description of the Sudden, Unexpected Event:		
Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable burden:		
XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER: All work will stop and the area will be secured or covered with plastic sheeting. After evaluation of the proper engineering controls to control the conditions(s) the engineering controls will be implemented and the ACM will be removed, encapsulated or otherwise rendered non-friable.		
XVII. I certify that an individual trained in the provisions of this regulation (40CFR Part 61, Subpart M) will be on-site during the demolition or renovation and evidence that the required training has been accomplished by this person will be available for inspection during normal business hours.		
_____ (Signature FOR Owner)		06-26-06 (Date)
XIII. I certify that the above information is correct.		
_____ (Signature FOR Owner)		06-26-06 (Date)

Asbestos Removal Specialists of Alaska, Inc.

3049 Davis Road

Fairbanks Alaska 99709

John J. Middleton, President

Phone 907-451-8550 e-mail arsa@acsalaska.net Fax 907-452-6374

Contractors License No. A-14675

Business License No. BL-090800

July 26, 2006

Department of Environmental Conservation
410 Willoughby Avenue
Juneau Alaska 99801

Reference: PCB/Lead Paint Mitigation
Juneau Federal Building
Juneau AK

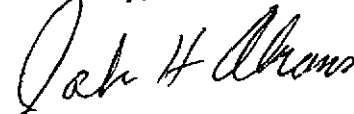
Pursuant to 18 AAC 75.130 this is a notification of asbestos-containing waste material from the above referenced project.

The waste material will be double-bagged/sealed inside disposal bags with preprinted warning labels or, other items which will be wrapped in two layers of 6 mil plastic with disposal warning labels attached. These items will be deposited in the asbestos waste section of the landfill named below. Transportation of bagged material will be via covered trucks.

All waste will be transported to the Fairbanks North Star Borough Landfill for disposal.

If you have any questions, or if we can provide further information, please call me at 451 8550.

Sincerely,



John Abrams
Contract Manager

Product Data

There will be no chemical removal agents used for the removal of the seals in the doors. Household dish washer soap will be used for the surfactant in wetting the seals. Spray glue may be used in setting up the regulated area for removal.

The boilers are being removed from the mechanical room and demolished. For this reason there are no concerns about compatibility with new products to be used in new construction.

MSDS information is attached in this section.

Spray
Glue

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION	
NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special-0	HMS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B
Manufacturer's Name: AMREP, INC.	DOT Hazard Classification: ORM-D
Address: 890 Industrial Park Drive Marietta, GA 30062	Identity (trade name as used on label): MISTY HEAVY DUTY ADHESIVE SPRAY
Date Prepared: 12/06/01	MSDS Number: A00315
Prepared By: IB/TR	Revision: 10
Information Calls: (770) 422-2071	NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA
EMERGENCY RESPONSE NUMBER: 1(800)255-3924	

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ACETONE	67-64-1	No	1000	750	d
HEXANE	110-54-3	Yes	50	50	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d
* Per Manufacturer's Recommendation					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A	Specific Gravity (H ₂ O=1): Concentrate Only = 0.893
Vapor Pressure: PSIG @ 70°F (Aerosols): Max 80	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/A	Evaporation Rate (" 1): N/A
Solubility in Water: Partial	Water Reactive: No
Appearance and Odor: Straw colored liquid with ketone solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE		Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A		SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus. Use water fog to cool containers to prevent rupturing & exploding containers. Provide shielding for personnel.	
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.			
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.			

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [] UNSTABLE	HAZARDOUS POLYMERIZATION [] WILL [X] WILL NOT OCCUR
Incompatibility (Mat to avoid): Strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input checked="" type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS	
ACUTE EFFECTS	
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.	
Eye Contact: Irritation.	Skin Contact: Irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of hexane may cause nerve damage.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH in positive pressure mode.	Eye Protection: Safety glasses recommended.
Protective Gloves: Nitrile.	
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

* Chemical Listed as Carcinogen or Potential Carcinogen. (a) NTP (b) IARC Monograph (c) OSHA (d) Not Listed (e) Animal Data Only

EXHIBIT 7

(21 Pages)

THE LITTLE SUSITNA
CONSTRUCTION MANAGEMENT PLAN
FOR
U.S. ARMY CORPS OF ENGINEERS
CONSTRUCTION PROJECTS

CONSTRUCTION MANAGEMENT PLAN

RESPONSIBILITY OUTLINE/WORK STATEMENT

SUMMARY

CM Responsibilities

The CM is directly contracted to the COE (U.S. Army Corps of Engineers) to provide business administration and management services related to *project, time, cost, and quality management* for the *design (optional) and construction* phase services.

Procurement and post-construction phase services, which are not included in the solicitation for this project, are also available. They are presented in this preliminary Management Plan for information purposes only.

Of paramount importance is meeting the project objectives regarding schedule, budget, scope, technical quality and regulatory requirements.

Little Susitna has established a team of in-house, technical specialists that will assist during the various phases of the project. The team comprises:

General Construction Managers

Architects

Environmental Engineers

Mechanical Engineers

Electrical Engineers

Civil Engineers

Structural Engineers

Construction Claims Experts

U.S. Army Corps of Engineers Responsibilities

The COE is the project manager, owner, developer and code authority for the project. The Public Building Service (PBS) typically has primary responsibility; it is the point of control for the client-agency. The PBS assigns a Project Director (PD), or more likely in this case a COR from the Design and Construction Division. The PD heads a Project Team, which is responsible for planning and managing the execution of the project. The PD has control of

and accountability for the project. The PD coordinates the resources of other PBS divisions, including Contracts, Real Estate, Planning, Real Property Management and other services. In addition, the PD coordinates directly with the client-agencies, state and local authorities and central office. COE Project Team members select both the A/E and the CM.

The COE Contracting Officer has the authority to enter into, administer and terminate contracts, and is responsible for doing so. A CO is assigned to each contract, with a corresponding warrant defining that officer's authority and limitations.

The COE Contracting Officer Representative (COR) is the individual who administers each contract. Generally, for design and construction work, personnel from the Design and Construction Division fill this role. Each COR has a written description of authority, which includes specific limitations.

As the principal technical authority for design and construction, the Design and Construction Division provides technical support to the COR. The CM augments these functions and provides technical support as needed.

The Real Estate Division assigns space to the COE and coordinates all tenant facility and space requirements. This division is responsible for space planning, developing agency requirements, and coordinating furnishing and telecommunications for tenant agencies. The Realty Officer also identifies above-standard work and secures Reimbursable Work Authorizations. The CM coordinates with the Real Property Management Division, usually during the tenant improvement phase of design.

The Real Property Management and Safety Division operates, maintains and protects COE buildings and facilities. The CM coordinates security, operational and startup requirements with this division.

The Planning Staff plans long-range facility use. It is responsible for compliance with policy regulations bearing on COE facilities. The CM coordinates with Planning for site historic preservation clearance and Environmental Impact Statement compliance.

The CM, in concert with the COE PD, coordinates with regional counsel in the Office of Acquisition Management concerning the review and clearance of procurement actions, changes and claims litigation.

A/E Responsibilities

The A/E is responsible for designing a project consistent with the prospectus, design program, site and EIS constraints, a fixed budget and the COE's standards and regulations. Once the design is accepted, the A/E prepares comprehensive and coordinated construction documents and provides ongoing administrative services throughout construction and project closeout. The CM checks the quality of A/E documents and services during the design phase as a quality check of the A/E's own quality control program.

Construction Contractor Responsibilities

The Contractor is responsible for the labor, equipment and materials required to construct the project, as well as for the quality of construction. In addition, the Contractor must comply with all contract requirements, including all social policy requirements.

DESIGN PHASE

General

The roles and responsibilities of the various participants in the design phase are focused on developing a final design that is cost-effective and buildable, while meeting both the COE budget contract documents that will guide the Contractor during construction to complete the project with a minimum of changes.

CM Responsibilities.

Design Reviews

The responsibilities of the CM during the design phase vary according to the estimated value of each project. For projects estimated at less than \$1,500,000 a review of working drawings for constructability will be performed. For projects with an estimated value of more than \$1,500,000 the CM will participate in the Project Directive Board review. A review of working drawings for constructability will be performed for each work order as it is required. For new construction the CM will review completed concept design, participate in the Project Directive Board review, and review working drawings for constructability. The lead in each of the above will be assumed by Streeter Dermanis (A/E), with engineering support from Elcon Associates (Mechanical/Electrical), Anne Symonds (Structural), and Thomas/Wright (Civil). Other team members will participate as the need arises.

Constructability Reviews

As the various work orders dictate, thorough constructability reviews will be performed. The reviews will provide input to the COR on constructability, and address the ability to maintain schedules and budget. Compliance with COE standards and with the scope of the project will be a key component of the reviews. If defects, conflicts, ambiguities, discrepancies, or lack of clarity in the contract documents are determined they will immediately be brought to the attention of the COR.

For those projects requiring special planning because of tenant relocations the CM will prepare detailed schedules, and conduct planning sessions with the appropriate representatives to minimize the disruption. Close coordination with the A/E will be maintained to allow the best possible input in dealing with these conditions.

Materials and labor availability will be considered by the CM, and if deficiencies exist the COR will be advised. The CM will provide recommendations, as appropriate, to address these perceived or known shortages or impacts. In addition the bid climate will be constantly evaluated to allow the CO to take maximum advantage of the projects buying power.

Value Engineering will be performed when directed by the various work orders. As the

constructability review is being conducted value will be a constant concern, and items which minimize value will be brought to the attention of the COR.

For all the tasks identified above the CM will be responsible to collect and properly distribute data from all the reviewing parties. The COR and the A/E will be issued all comments, and a recommendation will be provided regarding approval of the particular design phase.

The CM has no contractual relation directly with the A, and vice versa. The CM does not take any actions that are the responsibility of the A but makes recommendations to correct constructability problems and/or noted A errors and omissions.

Cost Estimates

During the design phase the CM will be responsible to review all cost estimates prepared by the A, and to advise the A and COR of the availability of the findings. A cost management system will be used to monitor the submission date of the A estimate and to advise the COR of any problems with the estimate. In addition, estimating, cost control, change control, and value engineering procedures will be established and followed to assure proper reporting, and compliance with COE standards.

Schedules

Within thirty (30) days after issuance of each work order the CM will submit to the CO a system to effectively plan for and report on the status of the work area and ensure completion, to the extent possible, of the work order project within the approved schedule. A critical path method (CPM) milestone schedule of approximately 25 to 50 activities will be provided. Working with the A, the design period will be clearly defined in the schedule, and updates will be provided as necessary.

Cost Control and Reporting

Controlling costs during design involves estimating, value engineering and development of a clear cost accounting system.

The CM will be responsible for cost management, and for reporting as appropriate to the COR. Estimating will be a key element of the cost management program. A uniform procedure for reviewing, analyzing and assessing each element with the A estimate in accordance with COE handbook PBS P3440.5 will be established. At each phase of design the CM will review unit costs, take-offs, inclusion of design elements and level of detail for the stage of design. The CM verifies that the estimate is within the available budget and funding. If requested, the CM will provide totally independent estimating services.

In addition to reviewing the A estimates, the CM prepares a cost reporting system that monitors the status of the budget, appropriations, contract commitments, changes to contracts and payments. The system will forecasts and give potential over-or-underruns of the budget and appropriations. The budget and cost report includes design, construction, COE support services, fixtures, furniture, equipment, other consulting services, site acquisition if applicable, and miscellaneous costs. The CM will update the cost report on a

monthly basis as a subsection of the monthly report. The project budgets will be developed so that cash flow projections can easily be prepared as required by the COE.

In addition to reporting general budget cost control, the CM maintains a detailed log of requested, proposed and actual design modification costs. In this way, the CM can assist the CO by preparing the amendment/modifications, negotiating the amendment with the A and documenting the justification for the change, as well as preparing the independent government estimate for the change and the final negotiation memorandum.

As required, the CM will conduct value management workshops in accordance with COE handbook PBS P80000.1A to ascertain that the government has received its maximum value per dollar for the effective life cycle of the project. The CM prepares a value engineering report on each workshop and provides recommendations to the COE for acceptance. Value engineering requirements are circulated to the A and the COE for review and final acceptance. For those issues where the A may take exception, "A" and "B" lists should be provided for primary and secondary elements, respectively, to potentially reduce cost and gain value management savings. In some cases the CM may recommend that "B" list value management recommendations be included as bid alternates to give COE the required flexibility to meet value, budget and scope requirements.

Meetings

The CM is responsible for coordination, establishing procedures, defining agendas, and chairing (as requested) and documenting meetings during the design phase. In addition to the specific design submittal review meetings, Core Project Team meetings (including COE Field Office Manager, Client Agencies, A, and other firms and individuals involved with the project) should be held on a regular basis. The meeting minutes for the Core Project Team meetings should indicate each issue and the responsible party to take the action, plus the response due date. The action/meeting minutes form the basis of the follow-on meeting agenda, which is to verify that all tasks are completed and issues are resolved. The CM can either chair the meetings or support the COR in chairing the meetings.

Problems Identifying and resolving problems as soon as they appear is critical to avoiding the compounding effect of problems building on each other.

The CM immediately advises the COE in writing of any problems with definitions of the issue, alternative actions and recommendations for resolution. The CM establishes a procedure for resolving problems. The problems are entered into an issues log, with notations of responsibility and due date for resolution. Problems are referred to as issues with respective actions within all levels of reporting. In all cases when reporting problems, impact to schedule and budget will be properly addressed.

Changes

No construction project is void of changes. The successful project, however, is one in which changes are carefully reviewed, tracked and documented. The CM is responsible to evaluate changes, prepare technical analyses required by the CO, track modifications and their

time-plus-cost impact in the CMCS and provide modification reports. When changes address constructability the CM will provide the appropriate recommendation to address the reason for change.

CONSTRUCTION PHASE

General The construction phase begins with the award of the contract and notice to proceed by the COE. The CM is the primary point of contact with the construction contractors but has no direct contractual relationship. The CM works with the COR and the PD to check that the project is fully documented, the schedule is maintained, cost and quality are controlled and processed in a timely manner and helps the COR modify the contract. The CM performs all project management and administrative duties related to time, cost and quality of construction administration plus inspection and testing services, in accordance with the construction management contract PBS-P3420.2 and specific project procedures.

Project Management

Project Management during construction includes all the administrative and contractual duties of the CM in addition to those covered under time, cost and quality management.

1. Documentation and Record Keeping. The project generates three types of files: *program files* to cover the general program of the project, *contract files* to cover the specific contracts for the A/E, CM, contractors and other consultants and *administrative files* to cover the general administration of the CM's and the COE's job site office.

During construction, the CM is the point of control for all documents and records. The CM develops procedures for the construction contract job site files for the COR and maintains them. They include CMCS logs of incoming/outgoing correspondence and other logs for submittals, clarification, requests for information, payment and changes. The CM establishes document flow procedures and filing processing, which are diagrammed and included in the Project Management Procedures Manual.

The COE COR has overall responsibility for documenting major project actions and maintaining complete records of the construction contract, including correspondence, modifications, claims, submittals, daily diaries and clarifications. The COE COR relies on the CM to provide documentation and keep records. Complete files are turned over to the COE upon project completion.

The A/E must document all responses concerning clarifications, requests for information, submittals, verifications of payments, verifications of changes, claims and general correspondence. The A/E's construction administration personnel must give copies of all correspondence and documents to the CM if they do not follow the prescribed flow through the CM.

The Contractor provides the documentation required by the contract and submits documents as required for approval by the COE and/or the A/E. This documentation

includes submittals, requests for information, schedules, changes, claims and payments.

2. Project Management Plan. The updated PMP, on projects where the plan is required, includes all detailed requirements for scheduling, submittals, payments, safety, inspection testing, contract modifications, claims, labor provisions, occupancy, budget and cost accounting. It also describes the duties and responsibilities of each party and diagrams the flow of documentation.

The CM updates the PMP for construction during the procurement phase and implements the CMCS module for construction.

The COR and/or PD review the PMP revisions and appraise, approve with comments or reject the proposed PMP for construction.

As a team member, the A/E provides input to the PMP for construction and helps implement its requirements. A meeting should be held before the Contractor begins any work to review all aspects of the procedures, policies and regulations.

The Contractor follows the procedures defined in the contract by the COE, A/E and CM. Detailed procedures should be developed by the CM in Division One of the specifications.

3. Utility Coordination. If the various projects are large enough so that it will affect numerous private and public utilities. Close coordination with these utility owners is critical to maintaining the schedule and managing the cost.

The CM assists in developing an as-built baseline survey and a master utility plan that defines who will provide the construction, provide replacement of and pay for enhancements to the system. A composite utility map should be developed during the design phase and a detailed critical path utility relocation schedule should be prepared for each utility. The CM should correlate the construction Contractor's schedule and the master schedule.

The CO reviews and has full contract authority over the master utility agreements. The COE relies on the A/E and the CM to define the technical aspects of the agreements and coordinate the requirements to manage schedule, cost and quality.

The A/E should have interfaced with the various municipalities the design phase of the composite utility mapping.

The General Conditions should require the Contractor to become familiar with existing utilities through a site investigation and coordinate all activities related to utilities.

4. Construction Management Control System (CMCS). The successful management of the project requires a strong CMCS. Computer systems and programs must facilitate the planning, scheduling, cost control and budget reporting and let the project team accurately gauge progress and cost, anticipate difficulties, and maneuver resources to compensate for delays or additional costs.

The CM provides, develops, installs and maintains a computerized data management, communication and retrieval system using PC equipment linked to the A/E, COE and CM offices. The CM analyzes, updates, tracks and develops CPM displays of the Contractor's schedule as well as control logs, cost reports and quality control reports.

The COE reviews, approves or disapproves of the proposed CMCS. COE personnel provide input to the system concerning their responsibilities and monitor their tasks accordingly.

The A/E provides data for entry to the CMCS and uses the system to track the areas within its responsibility.

The Contractor inputs data in the form of schedules, logs and reports, which are incorporated into the CMCS.

5. Progress Reporting. The monthly report describes and summarizes activities in progress for the month, highlights the areas of concern and recommends corrective action.

The CM continues to provide the monthly report, which is divided into sections for executive summary, time management, cost management, and issues and actions. It includes an update of the master project schedule, status of milestones, discussion of any slippage and work around recommendations, summarizes work-in-place and looks ahead to the next month's activities. Monthly cost status is included, providing the total cost exposure for contracts: change orders, rejected requests for change and potential claims. The monthly report also gives information on quality in terms of deficiencies and corrective actions.

In addition, the CM prepares weekly reports based on the weekly action meeting minutes, which specifically review all subjects including contractor issues, cost issues, schedule issues, clarifications, submittals, payments and claims. The CM prepares an executive summary and attaches it to the action meeting minutes attached. A synopsis of cost and schedule is a standard attachment.

Daily reports are prepared by the full-time inspection and testing personnel to record job site conditions, progress on activities, issues and communications. This information is provided on COE Form 1524, which is used by the CM to identify specific CPM schedule activity numbers for every element in the report. Video/audiotaping is performed daily to augment the daily diaries. Noncompliance notices, safety notices, change order work and PDL (price-to-be-determined-later) work are noted on the reports.

The COR and PD direct and contribute to the monthly report by the CM. They use this report to inform upper management and project team members of any issues.

The A/E contributes to the monthly report and attends weekly meetings. In addition, the A/E provides site reports weekly and consultant reports on specific issues.

The Contractor provides daily narrative reports and weekly summaries for review at the job

site meetings.

6. Photographic Reporting. The photographic record of the project keeps track of progress, specifically of problem areas such as disputed, changed and deficient work, to help construct a job site record to settle disputes.

The CM provides photographic records as requested by the COE, including periodic videos. A video/audiotape record should also be kept daily by inspection personnel.

The COE reviews and approves photographs and video information each month. The COE provides direction on COE requirements for photographs and/or videotaping.

The Contractor provides photographs per the contract requirements.

7. Meetings. Meetings during construction include a preconstruction conference, and jobsite meetings.

The CM assists in preparing for attending or chairing the following meetings:

- , **Preconstruction Conference.** The CM assists the COR and/or PD with the preconstruction conference. The CM prepares an agenda and takes the minutes. The meeting minutes should include the issues and actions to be taken, the responsible party, and dates when issues are to be resolved. The CM provides copies of the Contractor's procedures concerning requests for information, payments, changes and submittals and presents them at the preconstruction conference.
- , **Other Job Site Meetings.** The CM chairs construction job site meetings, including weekly status meetings that cover all aspects of the project, schedules change order meetings, quality control meetings and other meetings as required. The CM assists the COR in negotiations with the Contractor at the weekly change order meetings. In addition, a Core Team meeting should be held weekly with upper management, the COE, A/E and CM. The CM provides the agenda and takes minutes.

The COE's COR and/or PD attend meetings and chair the preconstruction conference.

The A/E provides technical input to the preconstruction conference. The A/E also attends the weekly job site meetings and provides technical backup for other meetings as required. The A/E participates in the weekly Core Team meetings.

The Contractor and subcontractors attend the preconstruction conference and weekly meetings.

8. Contract Administration of Shop Drawings & Submittals. Shop drawings and submittals must be carefully tracked and reviewed to verify accuracy and completeness.

The CM develops the procedures and provides the scheduling and CMCS tracking system for submittals. The CM establishes a numbering system to be used by the Contractor. The

Contractor provides a submittal schedule; CM independently develops a list of submittals to double check that all have been included on time. For each submittal, the schedule should include a date when the Contractor anticipates submission and the A/E's required due date. The CM includes this information in the CMCS submittal control log, which tracks submission dates, date to the A/E, due date, date returned from the A/E and date provided to the Contractor.

The CM verifies that all submittals are submitted and approved in time to preclude delaying the project. This is accomplished by cross-checking the submittal's schedule with the construction CPM schedule.

The CM processes, coordinates, distributes and tracks all submittals through processing. The submittal form should transmit not only technical information and approvals but also processing time. The CM informs the A/E and/or Contractor of any lags in performance or requirements. The CM immediately notifies the COR of any problems or delays caused by the A/E.

The CM reviews all submittals to check contract compliance and completeness; ascertain that they have been reviewed by the Contractor and stamped appropriately; and be sure that the proper number of copies has been received before transmittal to the A/E. The CM checks that the A/E's contract requirements are being met by verifying that they are making a thorough review. The CM recommends approval or rejection by the COR.

The CMCS provides logs for managing the process. The CAM defines the authorities and responsibilities; target time periods for review, approval or rejection; a tickler system; a system for delivering, reviewing, approving or rejecting submittals; distribution of submittals and resubmittals; and a mechanism to track progress. The COR approves the submittals based on the A/E's recommendations. The COR monitors the action of the Contractor, A/E and CM. The PD oversees and exercises all project control, ensuring that submittals are received, processed and reviewed promptly.

The A/E has the traditional duties for design review of submittals and recommendation for acceptance. The A/E reviews the submittals for conformance with the technical requirements of the specifications. After review, the A/E recommends disposition by stamping each sheet and returning it to the CM for processing using COE Form 2402. The A/E must clearly mark "approved," "approved as noted," "revise and resubmit" or "reject." The A/E must mark all copies so that the comments, modifications and rejections are visible and clearly understood. The A/E must process submittals promptly.

The Contractor develops a submittal schedule and provides submittals for review well in advance of construction so as not to delay the project. The Contractor must review and coordinate all subcontractor submittals and so certify. The Contractor's General Conditions should require them to meld the submittal schedule with the construction CPM schedule.

9. Contract Administration of Substitutions/Deviations. The CM reviews submittals to check that the Contractor has not provided substitutions or deviations and that the A/E has

not initiated or approved modifications through the submittal process. Both the Contractor and the A/E should initiate requests for information (RFIs) or clarifications for any deviations from the original scope. The features and characteristics of the original item need to be defined and compared to the proposed deviation or substitution.

The CM reviews all requests for substitution/deviation and initiates a modification accordingly, if approved by the COR. The CM develops and implements procedures for and incorporates tracking of the deviations/ substitutions into the CMCS.

Based on the recommendation of the CM and A/E, the CO either accepts the issue as equal or disapproves of it as being a substitution or deviation. The COR issues a request for modification if it is advantageous to the government and requests pricing.

The A/E is responsible for reviewing and approving submittals; however, the A/E cannot make scope changes. If deviations and/or substitutions are requested, the A/E reviews the salient characteristics and informs the CM if the product is an equal or a deviation/substitution. The A/E should not make changes in the submittal that result in a substitution/deviation and related change to the contract.

The Contractor must not include deviations or substitutions in submittals which must be initiated by issuing a Request for Substitution. This request compares the salient characteristics with the originally specified item. The Contractor must follow the value engineering cost proposal (VECP) procedures for potential life cycle and cost savings.

Substitutions and deviations must be monitored and approved to maintain consistency throughout the project.

10. Contract Administration Payments. The CM develops procedures for processing payments and develops CMCS processing logs. The Contractor must use COE Form 3508. The CM helps the COR and/or PD review the Contractor's payment and payment-for-materials requests. Requests are reviewed in relation to the cost-loaded CPM. The CM processes requests for payments in a timely manner to follow the Prompt Payment Act and avoid assessment of interest for late payments. The CM verifies the value of work in place and materials. The CM updates the construction progress chart accordingly.

Only the COR can actually approve the payment for the COE. Payment is be predicated on the recommendation from the CM and the A/E. The COR assures that all rules and regulations concerning payments are maintained.

The A/E should sign off on the construction Contractor's payment to document that the A/E has reviewed the Contractor's progress.

The Contractor must request a payment based on the cost-loaded CPM. Backup for material payment requests must include such items as bills of sale and certifications. The Contractor provides a rough draft for review and agreement on percentages of completion. Upon agreement, the Contractor submits the final request for payment on Form 3508.

11. Contract Administration of Requests for Information/Clarifications. Prompt responses to requests for information or clarification help to keep projects on schedule and minimize disruptions that lead to claims.

The CM establishes procedures for the issuance of RFIs by the Contractor and clarifications by the A/E. A two-part form should be established for the Contractor: the question requiring clarification, and the response by the A/E. It should also track the processing time. A similar form is established by the CM for the A/E to issue their clarifications. In addition, a numbering system is established, and blocks of numbers are assigned for tracking for the clarifications/RFIs.

Upon receipt of the clarification from the A/E or the RFI from the Contractor, the CM logs the document into the CMCS and monitors its processing to check that the A/E has responded promptly. The CM reviews clarifications and RFI responses to ascertain whether a contract modification is in order. All RFIs and/or clarifications that necessitate a modification must be approved and processed by a formal contract change order approved by the CO or COR. The CM coordinates this process among the A/E, COR, CO and, in some cases, the various user groups (as requested by the COE).

The CM recommends to the CO or COR acceptance of a clarification and/or RFI response. The reply is made to the Contractor through the COR/CO.

The contract documents are clarified directly by the A/E. The A/E answers all requests for technical information from the Contractor in a timely manner. In addition, the A/E directly issues technical clarifications if the A/E finds the documents need such clarification. The A/E also identifies and informs the COR through the CM of any clarifications or RFI responses that may result in modifying the contract. In addition to providing a written response, the A/E must provide any amended specification and/or drawings required for the clarification or RFI.

RFIs are submitted by the Contractor to the CM. RFIs should not be made orally. The Contractor must make RFIs well in advance, of construction to not delay construction, allowing for reasonable time for review by the A/E. The Contractor is required to proceed and notify the COR if they consider a change to be in accordance with the contract. The Contractor must follow the procedures established by the COE and CM.

12. Contract Administration of Claims. Quality management is the major focus of claim avoidance. When claims do arise, careful evaluation and cooperative negotiation help to avoid litigation.

A claim or written demand from the Contractor requesting payment or adjustment to the contract terms is submitted through the CM for the CO's written decision. Claims are processed under the disputes clause in accordance with the Contract Disputes Act. The CM reviews claims and provides an analysis, findings, determination and recommendation to the CO. The CM checks that the Contractor has provided the appropriate certification in

accordance with the Contracts Disputes Act. The CM develops procedures for the issuance, receipt and processing of claims in accordance with the regulation time periods. The CM implements control logs in the CMCS to track processing time and potential cost exposure.

The goal of the CM is claims avoidance and prevention. The CM needs to diffuse adversarial situations; quickly resolve issues; provide clear communication; promptly resolve conflicts, clarifications and RFIs; and provide timely administration. The CM anticipates claim situations by monitoring the clarification RFIs and rejected requests for changes. In addition, the CM is attuned to situations that may lead to claim allegations by the Contractor. The CM informs the COR of any indicators that the Contractor might be functioning in a claim environment.

The CM supports the COE in collecting all data required for claims, creating a document claim file and analyzing the collected material. The CM analyzes claims in terms of the construction CPM schedule, cost and drawings plus specifications. The analysis by the CM includes the CM's interpretation of the documents and its schedule or cost impact. The CM differentiates among claims concerning abnormally severe weather, delays to the Contractor, suspensions of work, terminations, change order work, constructive changes, cardinal changes, acceleration, conflicting documents, site conditions and the like. The CM recommends entitlement and quantities for a related change in a finding and determination.

Based on the information provided by the CM and the A/E, the CO issues a final decision in the time periods prescribed by the Contracts Disputes Act.

The A/E provides findings, facts and recommendations concerning all claims by the Contractor.

The Contractor must provide notification, documentation and certification within the prescribed times according to the contract. The Contractor must continue to proceed with the contract pending final resolution of the claim or dispute.

13. Contract Administration of Labor Provisions and DBE. Public agency projects are particularly sensitive to labor provisions mandated by law.

The CM assists in enforcing labor standards in accordance with the Davis/Bacon Act rate decisions and the Department of Labor. The CM reviews the job classification and wage rate submitted by the Contractor and interviews Contractor and subcontractor personnel as required to check them. Such interviews are incorporated in the labor standards interview form. The CM keeps a current list of all subcontractors and assesses the ratio of helpers, laborers and trainees compared to journeymen, verifying that the ratio meets bona fide apprentice program requirements. The CM checks certified payrolls. If violations are found, the CM may help the COE prepare reports of violation of labor standards.

The CM checks the Contractor's Small Business and DBE plans against contract requirements. The CM may help the Contractor calculate DBE interest. The CM interviews subcontractors to determine that they are working as planned.

The COR and/or PD assure that labor provisions and standards are adhered to by the Contractor. As outlined above, the CM helps the COE prepare the data necessary for the Department of Labor. The COE submits reports of violation to the Department of Labor. The COR and/or PD determines whether a good faith effort has been made to meet small business and DBE requirements.

The Contractor has the primary responsibility for complying with labor standard provisions, including its subcontractors, and for filing certified payrolls. The Contractor must make a good faith effort to meet the small business and DBE subcontract requirements.

14. Contract Administration of As-Built Drawings and Specifications. Correct as-built documentation is a critical element in the completion of the project record.

The CM maintains a current set of marked-up working drawings and specifications, including changes and deviations resulting from clarifications, requests for information, changes and unforeseen conditions. As-built information should be directly entered on the drawings. A copy of each change is provided to field personnel.

The COE distributes the final record drawings to the appropriate record files and operational personnel.

The A/E provides CADD information to the CM. Once provided with a marked-up set of as-built drawings and specifications, the A/E prepares the final record documents.

The Contractor provides a set of marked-up drawings to be compared to the CM's as-built drawings.

Time Management

1. Master Schedule

As part of performing the CMCS activities, the CM updates and maintains the master schedule for all activities during the construction phase. The CM incorporates the Contractors schedules into the master schedule. The CM develops and implements procedures for submission, updating and input to the master schedule and for updating the contractors schedule.

COE provides information to the CM concerning related schedule activities.

The A/E provides input for the master schedule as requested by the CM and by its contract.

The Contractor does not have any master schedule responsibilities.

2. Contract CPM Schedule and Administration

At the job site, for large projects, the CM supplies equipment hardware, software, and

personnel for tracking and analyzing the contractor's schedule. Upon receipt of the Contractor's cost-and staffloaded CPM schedule, the CM provides the COR with analysis and recommendation for acceptance or rejection. The CM reviews the Contractor's schedule to verify that the schedule logic is appropriate, that values assigned for labor and cost are reasonable and that the Contractor has not front-end-loaded the schedule. The schedule should, in fact, be "back-end-loaded" for performance testing, omissions and defects, training, O&M manuals, cleanup and the like. The cost-loaded schedule also must be tied to the payment process and to the schedule of estimates provided by the Contractor.

The CM continues to review and analyze updates provided by the Contractor. The CM develops procedures for analysis and approval of the Contractor's schedule submissions. The CM measures as planned versus actual performance throughout the project.

The CM provides a monthly summary report on the construction schedule, prepares the original milestones and actual accomplishments to date; and, if a delay is identified, tests the impact of the delay, determines whether the delay is excusable and recommends an appropriate course of action. The CM immediately notifies the COE of any potential delays to the contract schedule.

If the Contractor is responsible for the delay, the CM helps the COR provide show-cause-or-cure notices; makes recommendations for withholding of payments or retainage; assists in full or partial terminations, reviews and recommendations; and makes recommendations on the assessment of liquidated damages.

The CM maintains a concurrent schedule, provides the tabular and graphic reports necessary to analyze the Contractor's progress and provides 90-day look-ahead reports covering not only the Contractor's work, but also major milestones for the program as a whole, including the responsibilities of the COE, and A/E. Finally the CM provides an analysis in the narrative monthly report and updates the construction CPM schedule to match the as-built schedule.

The CO is responsible for approving the initial schedule and any modifications. The CO relies on the CM for schedule analysis and recommendations. The CO is responsible for issuing show-cause-or-cure notices, withholding payments, partial or full termination and assessment of liquidated damages to the Contractor as recommended by the CM.

The A/E is responsible for providing input into the schedule and for any technical analysis required by its contract documents.

The Contractor submits and updates a person and cost-loaded schedule as required by the contract. The Contractor is primarily responsible for meeting the contract completion date. The Contractor provides a schedule analysis for all requests of time.

Cost Management

1. Cost Control System

As part of the CMCS, the CM develops a cost control and financial system providing budget analysis, forecasts and financial and cost accounting records for the projects and for the program as a whole. The cost/financial report is updated and maintained during construction. The system provides and maintains all costs for the program, including, but not limited to, construction costs, fixtures, furniture, and equipment costs, report costs, COE costs, A/E and other consultant costs and CM costs. The purpose of this system is to track project expenditures and to maintain sufficient balances to see the project through completion.

The CM provides monthly narrative and tabular reports that are part of the presentation to the COE concerning cost status and projected final costs. The projections of exposure include not only commitments but also requirements for change and the related costs, rejected change requests, and contractor claims. The CM maintains logs of changes as related to the originally established contingency. The CO has responsibility for specific commitments.

The A/E contributes information on potential design and/or construction administration costs related to the consultants.

The Contractor has no responsibility in this area.

2. Contract Administration of Changes and Modifications

The administration of contract changes and/or modifications poses one of the largest potential cost risks to the projects. The CM establishes procedures to define responsibilities and authorities for contract price and time modifications. The CM established, within the CMCS and the cost accounting system, various logs that track requests for changes, proposed contract modifications, requests for proposals, negotiations, change orders and rejected changes. The logs include such features a cross-referencing with other contract documents, including clarifications, RFI's and field instructions; the processing time for submission of pricing information and for negotiation; establishing a government estimate; and issuance of the contract modification. The logs also establish the potential exposure to the COE, comparing the contractor's pricing to the official COE estimate prepared by the CM and the final negotiated contract amount. Finally, the logs show the status of the change as well as its potential justification such as differing site conditions, errors and omissions, and COE requests.

Change order requests can be initiated by the COE, the A/E, the Contractor or the CM. The CM provides a justification, including findings and determination;a recommendation to the COR to initiate the proposed change; and the corresponding request for proposal from the contractor. The CM coordinates with the A/E as necessary on technical issues.

The CM prepares an independent government estimate and analyzes the cost and time impacts as well as overhead and profit. Upon acceptance of the estimate by the CO, it becomes an official Government estimate for the changed work. The estimate is prepared before receipt of the pricing from the Contractor. The CM verifies that the Contractor has certified current cost and pricing data.

The CM assists in the negotiations with the COR and/or the CO as requested, including analysis and negotiation of profit and overhead. Before negotiation, the CM reviews all change order proposals received and makes recommendations to the CO. Upon completion of the negotiation the CM prepares a negotiation memorandum for approval by the CO. The CM prepares all final change order documentation for the CO's signature for the modification and initiates Standard Form 30.

If the change is recommended for rejection, the CM prepares the justification for the CO or the COR. If this process results in dispute, the CM follows the procedures outlined for disputes and claims.

In cases where change orders must be granted with price to be determined later (PDL), the CM verifies that they are settled before 50 percent completion. If mutual agreement cannot be reached on a PDL, the CM obtains all pertinent facts and makes a recommendation to the CO as to what action should be taken. The CM keeps detailed records of the equipment, materials and labor used and the impact of the change work.

The COR or CO is responsible for approving the initiation of the request for proposal, issuing the contract modification, negotiating the contract modification, approving the government estimate and obtaining the reviews and clearances. In addition, the CO decides whether circumstances warrant PDL procedures and may make change orders.

The A/E is responsible for providing technical guidance for each change order. Each change should be initiated by the A/E. In addition, the A/E provides any technical documents and changes to the specifications and drawings as necessary throughout the RFI/clarification process. In some cases, the A/E may also be required during the negotiation for technical background and expertise.

The Contractor must provide timely notification of the change, provide detailed backup, provide cost and pricing data, negotiate the change and install the change according to the contract.

Quality Management

1. QC Inspection. The CM is responsible for developing and implementing a quality assurance plan and quality control program. This process includes documenting all inspections, as well as identifying items that have been satisfactorily inspected and those requiring corrective action. Inspections conform with the Construction and Inspection Guide, Volumes 1 through 4, PBS P3420.3, and PBS P3420.6.

The CM verifies that all work performed by the Contractor and the installed material and equipment meet or exceed contract requirements. The CM promptly notifies the Contractor of any nonconforming work and supplies a copy of the notice of noncompliance to the COR. The CM established procedures for inspection and testing. The CM verifies that, with minimal impact to the construction operations, confirmation is made for all critical inspections.

The CM maintains a log of noncompliance notices for all omissions and defects and provides a copy to the Contractor at each weekly meeting. The CM recommends to the COR rejection of materials and workmanship not conforming to the requirements and notifies the Contractor in writing, with a copy to the COR. If an impasse is reached between the Contractor and the CM, the CO is promptly notified. The CO then issues a determination based on the CM's findings, determinations and recommendations.

The CM maintains daily inspection logs and reports, including observations of the work being accomplished, change or PDL work, verbal statements, actions taken, records of defective work noted in the field and other site events. These reports are part of the project management reporting system. In addition, the CM provides monthly quality reports to the CO.

The COE has the right, but not the responsibility, to inspect. The CO is provided copies of nonconforming items and makes the final determination concerning nonconforming materials and workmanship if an impasse is reached between the CM and the Contractor.

The A/E should make weekly site visits and provide site observation reports. In addition, the A/E provides technical assistance in inspections for unique requirements.

The Contractor is responsible for construction quality and must provide a control system. The Contractor allows all access and provides facilities for COE inspection. The Contractor provides inspection records as requested. The Contractor must promptly replace or correct defective work. The Contractor provides timely notification of requests for inspection.

2. Testing. The CM has the responsibility to test the material and workmanship provided by the Contractor for conformity with contract requirements.

The CM subcontracts the work to a certified independent testing laboratory after appropriate procurement practices have been followed. The CM prepares a testing schedule to verify that all tests accord with the specifications and the contract schedule. The CM verifies that the tests are being conducted as scheduled, monitors test results for acceptability, establishes procedures for testing and notification, verifies that tests are conducted according to COE requirements, witnesses selected tests to confirm that procedures are proper, monitors test results for acceptability and recommends corrective measures arising from test failures.

As with inspection, the CO assures that testing accords with the requirements in the specifications for testing. The Contractor also assures that all tests occur as scheduled.

3. Safety and Environmental Management. The CM reviews safety programs, checking that the Contractor and subcontractors have provided safety program sin accordance with contract requirements. In addition, the CM monitors safety compliance by the Contractor and reports deficiencies. The CM coordinates and cooperates with officials of other federal,

state and local agencies who have authority to enforce OSHA requirements.

The primary responsibility for site safety, the safety program plan and ensuring that all safety and environmental requirements are followed rests with the Contractor. The CM verifies that the detailed requirements in accordance with accident and safety reporting procedures are discussed and followed.

The Safety and Environmental Management Branch (SEMB) is responsible for the overall administration of safety and the environmental management program. The SEMB conducts accident and safety investigations and reviews and comments on the Contractor's safety plan, ensuring compliance with relevant COE, federal, state, and local requirements. The plan is approved by the CO or the COR.

The A/E must notify the COE immediately of any safety issues noted.

The Contractor has the primary responsibility for site safety, the safety program plan and ensuring that all safety and environmental requirements are followed.

Post-Construction Services

1. **Closeout.** The CM develops and implements procedures for closeout. A three-part closeout process includes substantial completion, final completion, and final acceptance. Substantial completion is defined as when the project can be used for its intended purpose. Final completion is defined as when all physical work has been completed. Final acceptance is defined as when all physical and administrative requirements have been completed and all claims have been released.

The CM verifies that the Contractor has provided the required administrative and technical functions for performing testing, operation and maintenance manuals, and training prior to substantial completion.

The CM recommends to the CO both substantial and final completion based upon the review and completion by the Contractor. Upon achieving final completion, the Contractor must begin closeout and acceptance of the contract. The Contractor submits all remaining administrative data required by the contract, such as descriptions of materials and parts, record documents and warranties and guarantees. The CM assembles this data and transmits them to the COE. Upon receipt of this data and release of claims, the CM recommends to the CO/COR the final acceptance of the project.

The CO has the ultimate responsibility for establishing substantial completion, final completion, and final acceptance based upon the CM's and A/E's recommendations.

The A/E provides substantial and final completion inspections with its subconsultants in coordination with the CM's inspection team. The A/E and CM jointly recommend substantial and final completion to the CO/COR.

The Contractor provides all performance testing, training, and operation and maintenance manuals before substantial completion.

The Contractor must certify substantial and final completion, complete all omissions and defects, provide all comments for acceptance and provide a release of claims.

2. Claims. The CM assists in the resolution of claims. This process includes findings, determinations and recommendations for appeals before the COE Board of Contract Appeals and/or the Court of Claims. In this regard, the CM provides technical analysis and administrative support to the CO and legal counsel for the claims process.

The COE has the ultimate responsibility for determining claim issues and for issuing final decisions establishing the process for the Board of Contract Appeals.

The A/E may be required to comment on interpretation and technical analysis made in the course of defending the COE against claims.

The Contractor must file claims in accordance with the contract.